

ICS 13.220.50; 91.060.10

Supersedes
DIN EN 1364-4:2007-06

**Fire resistance tests for non-loadbearing elements –
Part 4: Curtain walling –
Part configuration;
English version EN 1364-4:2014,
English translation of DIN EN 1364-4:2014-05**

Feuerwiderstandsprüfungen für nichttragende Bauteile –
Teil 4: Vorhangfassaden –
Teilausführung;
Englische Fassung EN 1364-4:2014,
Englische Übersetzung von DIN EN 1364-4:2014-05

Essais de résistance au feu des éléments non-porteurs –
Partie 4: Façades rideaux –
Configuration partielle;
Version anglaise EN 1364-4:2014,
Traduction anglaise de DIN EN 1364-4:2014-05

Document comprises 62 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This document (EN 1364-4:2014) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings” (Secretariat: BSI, United Kingdom).

The responsible German body involved in its preparation was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Working Committee NA 005-52-02 AA *Brandverhalten von Baustoffen und Bauteilen — Bauteile*.

Amendments

This standard differs from DIN EN 1364-4:2007-06 as follows:

- a) the standard has been brought in line with EN 1364-3;
- b) Clause 3 “Terms and definitions” has been extended;
- c) test installations and procedures have been extended and rendered more precise;
- d) temperature measurement points have been brought in line with EN 1364-1;
- e) the direct field of application has been extended to include overrun times.

Previous editions

DIN EN 1364-4: 2007-06

English Version

Fire resistance tests for non-loadbearing elements - Part 4: Curtain walling - Part configuration

Essais de résistance au feu des éléments non-porteurs -
Partie 4: Façades rideaux - Configuration partielle

Feuerwiderstandsprüfungen für nichttragende Bauteile -
Teil 4: Vorhangfassaden - Teilausführung

This European Standard was approved by CEN on 9 November 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Test equipment	8
4.1 General testing principles	8
4.2 Furnace configuration	9
4.3 Supporting floor.....	9
5 Test conditions	9
6 Test specimen	10
6.1 Size	10
6.2 Number of specimens	10
6.3 Design	10
6.3.1 General.....	10
6.3.2 Standard configuration	11
6.3.3 Restraint of the specimen	11
6.3.4 Surfaces	12
6.3.5 Perimeter seal	12
6.4 Construction.....	13
6.5 Verification	13
7 Installation of the test specimen	13
7.1 General.....	13
7.2 Supporting floor.....	13
7.2.1 Standard supporting floor	13
7.2.2 Non-standard supporting floor.....	13
7.3 Furnace closure	14
7.4 Fixing of the framing system	14
8 Conditioning.....	14
9 Application of instrumentation.....	14
9.1 Thermocouples	14
9.1.1 Furnace thermocouples (plate thermometers)	14
9.1.2 Unexposed face thermocouples	14

9.2	Pressure	17
9.3	Radiation	17
10	Test procedure.....	17
11	Performance criteria.....	17
12	Test report.....	18
13	Field of direct application of test results	19
13.1	Rules for curtain walling type A.....	19
13.1.1	General rules.....	19
13.1.2	Rules for the complete construction.....	19
13.1.3	Framing system	21
13.1.4	Spandrel panels.....	24
13.2	Rules for curtain walling type B.....	28
13.3	Perimeter seal	28
13.3.1	General	28
13.3.2	Material	28
13.3.3	Width/depth.....	29
13.3.4	Fixing of the perimeter seal.....	29
13.3.5	Covering	29
13.4	Supporting floor	29
Annex A	(informative) Guidance on testing curtain walling – part configuration.....	44
A.1	Standard configuration.....	44
A.1.1	General	44
A.1.2	Supporting floor	44
A.1.3	Parts of a curtain walling	44
A.1.4	Specimen selection	45
A.2	Test principles and requirements.....	45
A.3	Fire from the inside	47
A.3.1	General	47
A.3.2	Curtain walling type A.....	47
A.3.3	Curtain walling type B.....	47
A.3.4	Perimeter seal.....	48
A.3.5	Fixing of the framing system.....	48
A.4	Fire from the outside.....	48
Annex B	(normative) Standard configurations	51
Annex C	(normative) Radiation calculation	56
Annex D	(normative) Field of direct application of test results for unitised construction	59
D.1	Rules for curtain walling type A.....	59
D.1.1	General	59
D.1.2	Exposure conditions.....	59
D.1.3	Rules for the complete construction.....	59
D.1.4	Spandrel panels.....	59
D.2	Rules for curtain walling type B.....	59
	Bibliography.....	60

Foreword

This document (EN 1364-4:2014) 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 2014, and conflicting national standards shall be withdrawn at the latest by August 2014.

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

This document supersedes EN 1364 –4:2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of 89/106/EEC.

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

Introduction

WARNING

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 can be developed during the test. Mechanical and operational 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 follow written safety instructions at all times.