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DIN EN 15269-5:2014-09

Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware – Part 5: Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows; English version EN 15269-5:2014+A1:2016, English translation of DIN EN 15269-5:2016-12

Erweiterter Anwendungsbereich von Prüfergebnissen zur Feuerwiderstandsfähigkeit und/oder Rauchdichtigkeit von Türen, Toren und Fenstern einschließlich ihrer Baubeschläge –
Teil 5: Feuerwiderstandsfähigkeit von verglasten Drehflügeltüren und zu öffnenden Fenstern mit Metall(rohr)rahmen;
Englische Fassung EN 15269-5:2014+A1:2016,
Englische Übersetzung von DIN EN 15269-5:2016-12

Application étendue des résultats d'essais en matière de résistance au feu et/ou d'étanchéité à la fumée des blocs-portes, blocs-fermetures et ouvrants de fenêtre, y compris leurs éléments de quincaillerie intégrés –
Partie 5: Résistance au feu des blocs-portes vitrés battants et pivotants, à ossature métallique, et des fenêtres vitrées à ossature métallique;
Version anglaise EN 15269-5:2014+A1:2016,
Traduction anglaise de DIN EN 15269-5:2016-12

Document comprises 133 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 15269-5:2014+A1:2016) 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 *DIN-Normenausschuss Bauwesen* (DIN Standards Committee Building and Civil Engineering), Working Committee NA 005-52-05 AA *Brandverhalten von Baustoffen und Bauteilen — Feuerschutz- und Rauchschutzabschlüsse (SpA zu CEN/TC 127/WG 3 sowie Teilbereichen von CEN/TC 127/WG 2, CEN/TC 127/WG 7, CEN/TC 33 und ISO/TC 92/SC 2).*

This standard includes Amendment A1 approved by CEN on 2016-03-13.

Amendments

This standard differs from DIN EN 15269-5:2014-09 as follows:

a) in Table A.1, revisions have been made to construction parameters A.5.6, B.4.15 and B.4.16;

b) revisions have been made to Figure A.15b, Figure A.25, Figure A.27, Figure A.30, Figure A.43a, Figure A.43b, Figure C.2, Figure C.3 and Figure C.5.

Previous editions

DIN EN 15269-5: 2014-09

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 15269-5:2014+A1

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ICS 13.220.50; 91.060.50

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English Version

Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 5: Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows

Application étendue des résultats d'essais en matière de résistance au feu et/ou d'étanchéité à la fumée des blocs-portes, blocs-fermetures et ouvrants de fenêtre, y compris leurs éléments de quincaillerie intégrés - Partie 5: Résistance au feu des blocs-portes vitrés battants et pivotants, à ossature métallique, et des fenêtres vitrées à ossature métallique

Erweiterter Anwendungsbereich von Prüfergebnissen zur Feuerwiderstandsfähigkeit und/oder Rauchdichtigkeit von Türen, Toren und Fenstern einschließlich ihrer Baubeschläge - Teil 5: Feuerwiderstandsfähigkeit von verglasten Drehflügeltüren und zu öffnenden Fenstern mit Metall(rohr)rahmen

This European Standard was approved by CEN on 17 April 2014 and includes Amendment 1 approved by CEN on 13 March 2016.

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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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 15269-5:2014+A1:2016) 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 April 2017, and conflicting national standards shall be withdrawn at the latest by April 2017.

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 includes Amendment 1 approved by CEN on 2016-03-13.

This document supersedes EN 15269-5:2014.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports basic work requirements of Regulation (EU) 305/2011.

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, 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

This document is one of a series of standards listed below and intended to be used for the purpose of producing an extended application report based on the evaluation of one or more fire resistance and/or smoke control tests. These standards may also be used to identify the best selection of test specimens required to cover a wide range of product variations.

EN 15269 ,*Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies including their elements of building hardware*, currently consists of:

— *Part 1: General requirements*;

— *Part 2: Fire resistance of hinged and pivoted steel doorsets*;

— *Part 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows*;

— *Part 4: Fire resistance of hinged and pivoted glass doorsets (in preparation)*;

— *Part 5: Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows*;

— *Part 6: Fire resistance of sliding timber doorsets*;

— *Part 7: Fire resistance of sliding steel doorsets*;

— *Part 8: Fire resistance of horizontally folding timber doorsets (in preparation)*;

— *Part 9: Fire resistance of horizontally folding steel doorsets (in preparation)*;

— *Part 10: Fire resistance of steel rolling shutter assemblies*;

— *Part 11: Fire resistance of operable fabric curtains*;

— *Part 20: Smoke control for hinged and pivoted steel, timber and metal framed glazed doorsets*.

1 Scope

This European Standard covers hinged and pivoted steel (any kind) and aluminium based framed, glazed doorsets or openable windows.

This European Standard prescribes the methodology for extending the application of test results obtained from resistance to fire test(s) conducted in accordance with EN 1634-1.

Subject to the completion of the appropriate test or tests selected from those identified in Clause 4 the extended application may cover all or some of the following examples:

— integrity (E), integrity/radiation (EW) or integrity/insulation (EI_1 or EI_2) classifications;

— doorsets and openable windows;

— door / window leaf (leaves);

— glazing and non-glazed panels in doorset and openable window;

— items of building hardware;

— decorative finishes;

— intumescent, smoke, draught or acoustic seals;

— alternative supporting construction(s).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 1634-1, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware — Part 1: Fire resistance test for door and shutter assemblies and openable windows*

EN 1634-2, *Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware — Part 2: Fire resistance characterisation test for elements of building hardware*

EN 13501-2:2007+A1:2009, *Fire classification of construction products and building elements — Part 2: Classification using data from fire resistance tests, excluding ventilation services*

EN 15269-1, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware — Part 1: General requirements*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1363-1, EN ISO 13943, EN 1634-1, EN 1634-2 and EN 15269-1 together with the following apply.

3.1
full scale test
test of a full scale doorset in accordance with EN 1634-1

3.2
small scale test
test on elements of building hardware in accordance with EN 1634-2 and where the decision process given in EN 1634-2 permits its use

3.3
effective rebate depth-2
dimension of the door leaf thickness of overlapping adjacent edges of door leaf relative to the door frame, transom or side panel or flush overpanel

Note 1 to entry: At the meeting edges and for rebated leaves the dimension is the depth of the largest rebate. See Figure 1.

Note 2 to entry: The effective rebate depth-2 is different from the effective rebate depth definition given on other standards of the series EN 15269.

3.4
opening outwards
means opening the doorleaf away from the fireside

4 Determination of the field of extended application

4.1 General

4.1.1 Before there can be any consideration for extended application the doorset shall have been tested and classified in accordance with EN 1634-1 and EN 13501-2 respectively in order to establish a classification for the doorset.

4.1.2 A review of the construction parameters can indicate that one or more characteristics may be improved by a particular parameter variation. All evaluations shall be made on the basis of retaining the classifications obtainable from testing to EN 1634-1, including those lower than the test duration. However, this shall never lead to an increased classification for any specific parameter beyond that achieved by one resistance to fire test unless specifically identified in the relevant Construction Parameter Variation tables.

4.1.3 If, by following the ensuing procedure, any part of the classification cannot be achieved by extended application rules that part of classification shall be omitted from the subsequent extended application report and classification report.

4.2 How to use extended application rules in Annex A

4.2.1 Identify the variations from the original resistance to fire test specimen(s) which are required to be covered by an extended application report.

4.2.2 Locate the variations in the appropriate parameter variation by reference to columns (1) and (2) of Table A.1.

4.2.3 Review the type of classification to be retained from column (3) and establish from the contents of column (4) whether any extended application is available beyond the direct application rules in EN 1634-1 without the need for further testing.

4.2.4 Where this is deemed to be possible this can be recorded in the extended application report together with any appropriate restrictions and the stated rules from column (4) of Table A.1.

4.2.5 Where the variations required can only be achieved from additional testing, the additional resistance to fire test can be made on a similar specimen type i.e. a doorset of the same or more onerous configuration where the leaf construction is fundamentally the same as tested. Alternatively, column (5) identifies an option for alternative testing and relevant resistance to fire test parameters.

4.3 Procedure for maximum field of extended application

4.3.1 It is possible to provide an extended field of application from a single resistance to fire test. However, where a manufacturer intends to produce a range of doors incorporating single doors and also double doors, with or without side, transom or flush over panels, with or without glazing, with or without louvres or ventilation grilles, with alternative elements of building hardware, etc., it is recommended that careful consideration is given to the complete range of doorset designs and options in order to minimise the testing required before testing commences.

4.3.2 Establish all the parameter variations which are required to be part of the product range.

4.3.3 Determine which are the most important specification requirements and incorporate as many as possible into the specimen(s) for the first resistance to fire tests in the series.

4.3.4 Conduct the first resistance to fire test or a series of tests and then establish which of the original desired parameter variations have not been covered by the resistance to fire tests, including direct application possibilities.

4.3.5 Identify these parameter variations in Annex A and establish if any extended application is possible without further testing.

4.3.6 Record this for the extended application report together with any restrictions and rules given in column (5) in Table A.1.

4.3.7 Evaluate which, if any, of the desired parameter variations have not been covered by the field of direct application or the initial field of extended application derived from 4.3.5.

4.3.8 Determine if the product range is to include only single leaf doorsets or if the range is to also include double leaf configurations. Where only single doorsets are to be part of the product range then the outstanding construction parameter variations shall only be incorporated into specimens for the single leaf doorset. Where single leaf and double leaf doorsets are to be included in the product range, the outstanding construction parameter variations for the extended application of single leaf doorsets may be incorporated into either repeated single leaf doorset resistance to fire tests or in the weakest option, as defined in column 5 of Table A.1, double leaf doorset configurations.

4.3.9 Select the required outstanding parameter variations from column (1) and column (2) of Table A.1 and observe from column (5) of Table A.1 which are the most appropriate weakest specimen options for further testing.

4.3.10 If the complete selection of required parameter variations has not been covered by the resistance to fire tests completed in accordance with 4.3.8 and 4.3.9 above, then an appropriate resistance to fire test or tests may be repeated with the additional product variations incorporated.

4.4 Analysis of resistance to fire test results

4.4.1 In order to maximize the extended field of application, it is important that the test reports shall record details of any premature integrity and / or insulation failure also record details of any distortion to evaluate low, medium and high distortion (see Annex A).

4.4.2 Where a series of resistance to fire tests have been conducted, the extended field of application shall be based on the lowest performance achieved from the complete series of resistance to fire tests unless premature failure has been attributed to one or more specific construction parameter variation.

4.4.3 Where it has been possible, to identify specific parameter failures, the extended application for all other construction parameter variations can be based on the performance achieved after isolating the premature failure(s).

5 Extended application report

Prepare an extended application report in accordance with the requirements of Clause 6 of EN 15269-1, based on the results of evaluations in accordance with the above.

6 Classification report

The classification report shall be determined from the results of the extended application report and presented in accordance with Annex A of EN 13501-2:2007+A1:2009.

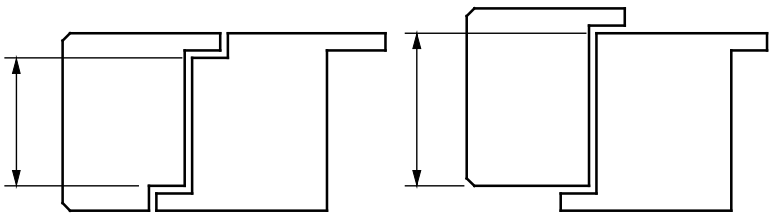

Figure 1 — Effective rebate depth-2