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DIN EN 15269-20:2009-12

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 20: Smoke control for doors, shutters, operable fabric curtains and openable windows;

English version EN 15269-20:2020,

English translation of DIN EN 15269-20:2021-03

Erweiterter Anwendungsbereich von Prüfergebnissen zur Feuerwiderstandsfähigkeit und/oder Rauchdichtigkeit von Türen, Toren und Fenstern einschließlich ihrer Baubeschläge –

Teil 20: Rauchdichtigkeit von Türen, Toren, Abschlüssen, Gewebevorhängen und zu öffnenden Fenstern;

Englische Fassung EN 15269-20:2020,

Englische Übersetzung von DIN EN 15269-20:2021-03

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 20: Étanchéité à la fumée des portes, fermetures, rideaux en toile manoeuvrables et ouvrants de fenêtre;

Version anglaise EN 15269-20:2020,

Traduction anglaise de DIN EN 15269-20:2021-03

Document comprises 195 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 15269-20:2020) 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 “Reaction to fire of building materials and building components — Fire and smoke control door and shutter assemblies (national mirror committee for CEN/TC 127/WG 3 and sub-sections of ISO/TC 92/SC 2)”.

For current information on this document, please go to DIN’s website (www.din.de) and search for the document number in question.

Amendments

This standard differs from DIN EN 15269-20:2009-12 as follows:

- a) the title has been adapted;
- b) Clause 1 “Scope” has been revised: hinged and pivoted (e.g. metal, timber, framed glazed) doors and openable windows of single or double leaf doorsets have been added; metal rolling shutters and operable fabric curtains (excluding overlapping systems) have been added;
- c) Clause 2 “Normative references” has been updated;
- d) Clause 3 “Terms and definitions” has been revised;
- e) Clause 4 “Determination of the field of extended application” has been revised;
- f) Annex A (informative) “Construction parameter variations”: introduction has been revised; Table A.1 and figure to Table A.1 have been revised; new Table A.2 and figures to Table A.2 have been added; new Table A.3 and figures to Table A.3 have been added;
- g) new Annex B (normative) “Arrangements for hinged and pivoted doorsets incorporating side and/or overpanels” has been added;
- h) new Annex C (normative) “Calculation methods” has been added;
- i) new Annex D (normative) “Stress calculation method for metal rolling shutter and fabric curtain assemblies” has been added;
- j) new Annex E (informative) “Examples for stress calculations for load-bearing components of metal rolling shutter and fabric curtain assemblies” has been added;
- k) the document has been completely revised in form and substance.

Previous editions

DIN EN 15269-20: 2009-12

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 20: Smoke control for doors, shutters,
operable fabric curtains 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 20: Étanchéité à la fumée des portes,
fermetures, rideaux en toile manœuvrables et ouvrants
de fenêtre

Erweiterter Anwendungsbereich von Prüfergebnissen
zur Feuerwiderstandsfähigkeit und/oder
Rauchdichtigkeit von Türen, Toren und Fenstern
einschließlich ihrer Baubeschläge -
Teil 20: Rauchdichtigkeit von Türen, Toren,
Abschlüssen, Gewebevorhängen und
zu öffnenden Fenstern

This European Standard was approved by CEN on 27 April 2020.

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, 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, Turkey and United Kingdom.



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

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Contents

Page

European foreword	3
Introduction	5
1 Scope	6
2 Normative references	7
3 Terms and definitions	8
4 Determination of the field of extended application	9
4.1 General	9
4.2 Procedure for evaluation	9
4.3 Procedure for maximum field of extended application	10
4.4 Interpretation of test results	10
5 Extended application report	11
6 Classification report	11
Annex A (normative) Construction parameter variations	12
Annex B (normative) Arrangements for hinged and pivoted doorsets incorporating side and/or overpanels	176
Annex C (normative) Calculation methods	183
Annex D (normative) Stress calculation method for metal rolling shutter and fabric curtain assemblies	185
Annex E (informative) Examples for stress calculations for load-bearing components of metal rolling shutter and fabric curtain assemblies	186
E.1 Barrel calculations	186
E.2 Barrel support bracket calculations	187
E.3 Axle calculations	189
E.4 Endplate calculations	190

European foreword

This document (EN 15269-20:2020) 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 March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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 supersedes EN 15269-20:2009.

This document has been prepared under a standardization request given to CEN and CENELEC by the European Commission and the European Free Trade Association.

In comparison with EN 15269-20:2009, the following changes have been made:

- Clause 1, "Scope":
 - revised,
 - hinged and pivoted (e.g. metal, timber, framed glazed) doors and openable windows of single or double leaf, added,
 - metal rolling shutters and operable fabric curtains (excluding overlapping systems), added;
- Clause 2, "Normative references" updated;
- Clause 3, "Terms and definitions" revised;
- Clause 4, "Determination of the field of extended application" revised;
- Annex A (normative) "Construction parameter variations":
 - introduction revised,
 - Table A.1 and figure to Table A.1 revised,
 - new Table A.2 and figure to Table A.2 added,
 - new Table A.3 and figure to Table A.3 added;
- new Annex B (normative) "Arrangements for hinged and pivoted doorsets incorporating side and/or overpanels" added;
- new Annex C (normative), "Calculation methods" added;
- new Annex D (normative) "Stress calculation method for metal rolling shutter and fabric curtain assemblies" added;

- new Annex E (informative) "Examples for stress calculations for load-bearing components of metal rolling shutter and fabric curtain assemblies" added;
- complete editorial and contented revision.

The EN 15269 series of standards *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 5: Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows;*
- *Part 6: Fire resistance of sliding timber doorsets [in preparation];*
- *Part 7: Fire resistance for steel sliding doorsets;*
- *Part 10: Fire resistance of steel rolling shutter assemblies;*
- *Part 11: Fire resistance for operable fabric curtains;*
- *Part 20: Smoke control for doors, shutters and openable windows [the present document].*

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, 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, Turkey and the United Kingdom.

Introduction

This document is one of a series of standards listed above and is 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.

A review of the doorset construction parameters can indicate that one or more characteristics may be improved by a particular parameter variation. All evaluations need to be made on the basis of retaining the smoke control classifications obtainable from testing to EN 1634-3. However, this will never lead to an increased classification for any specific smoke performance parameter beyond that achieved during any one test unless specifically identified in the relevant Construction Parameter Variation tables within this series of standards.

Issued extended application reports after prior versions of the series EN 15269 (e.g. EN 15269-20:2009) stay valid as long as there is no change in the construction(s) described in the report.

1 Scope

This document, which is intended to be read in conjunction with EN 15269-1, covers doors, shutters, openable windows and fabric curtains of any material and of the following types:

- hinged and pivoted (e.g. metal, timber, framed glazed) doors and openable windows of single or double leaf (Table A.1);
- horizontally and vertically moving steel sliding doors of single or double leaf with and without pass doors, including telescopic doorsets (Table A.2);
- metal rolling shutters and operable fabric curtains (excluding overlapping systems) (Table A.3).

The following construction products are not covered by this standard:

- unframed glass doors and openable windows;
- sectional doors (including stacking doors);
- vertically and horizontally folding doors;
- horizontally and vertically moving timber sliding doors;
- horizontally and vertically moving framed sliding doors (metal or timber).

In this document, whenever doors are mentioned, the whole range of doors, shutters, openable windows and operable fabric curtains is included or otherwise mentioned.

This document prescribes the methodology for extending the application of test results obtained from test(s) conducted in accordance with EN 1634-3.

Subject to the completion of the appropriate test or tests, the extended application can cover all or some of the following examples:

- Ambient Temperature Smoke Control (S_a) and Medium Temperature Smoke Control (S_{200}) classifications;
- leaf/leaves;
- wall/ceiling fixed elements;
- glazed elements, louvres and/or vents;
- side, transom or overpanels;
- items of building hardware;
- decorative finishes;
- intumescent, smoke, draught or acoustic seals;
- alternative supporting construction(s).

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 179, *Building hardware - Emergency exit devices operated by a lever handle or push pad, for use on escape routes - Requirements and test methods*

EN 1125, *Building hardware - Panic exit devices operated by a horizontal bar, for use on escape routes - Requirements and test methods*

EN 1303, *Building hardware - Cylinders for locks - Requirements and test methods*

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 1634-3, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 3: Smoke control test for door and shutter assemblies*

EN 1993-1-2, *Eurocode 3: Design of steel structures - Part 1-2: General rules - Structural fire design*

EN 12101-1, *Smoke and heat control systems - Part 1: Specification for smoke barriers*

EN 13501-2, *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 15269-11:2018+AC:2019, *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 11: Fire resistance for operable fabric curtains*

EN 15684, *Building hardware - Mechatronic cylinders - Requirements and test methods*

EN ISO 75-1, *Plastics - Determination of temperature of deflection under load - Part 1: General test method (ISO 75-1)*

EN ISO 75-2, *Plastics - Determination of temperature of deflection under load - Part 2: Plastics and ebonite (ISO 75-2)*

EN ISO 75-3, *Plastics - Determination of temperature of deflection under load - Part 3: High-strength thermosetting laminates (ISO 75-3)*

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 1634-3 and EN 15269-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

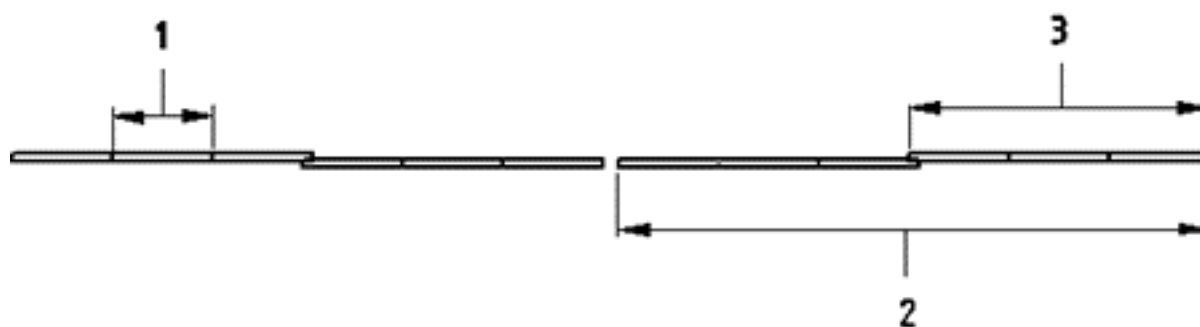
core

material fitted centrally within the thickness of a door leaf which may consist of a single sheet of material or a combination either of sheets of the same material or layers of different materials

3.2

leaf/element/panel

different parts of a sliding doorset as indicated in Figures 1 and 2 below



Key

- 1 panel
- 2 leaf
- 3 element

Figure 1 — Double leaf telescopic door



Key

- 1 panel
- 2 leaf

Figure 2 — Double leaf sliding door

3.3

glazed aperture

cut-out in a solid flush door filled with glass