

SLOVENSKI STANDARD

SIST EN 15269-20:2020

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Nadomešča:

SIST EN 15269-20:2009

Razširjena uporaba rezultatov preskusov požarne odpornosti in/ali dimotesnosti za vrata, zapore in okna, ki se odpirajo, vključno z njihovim okovjem - 20. del: Požarna odpornost vrat, zapor, ognjevarnih zaves in oken, ki se odpirajo

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

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

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

Ta slovenski standard je istoveten z: EN 15269-20:2020

ICS:

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
91.060.50	Vrata in okna	Doors and windows

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EUROPEAN STANDARD

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NORME EUROPÉENNE

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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 operable window assemblies, including their elements of building hardware - Part 20: Smoke control for doors, shutters, operable fabric curtains and operable windows

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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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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;

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- 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.

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EN 15269-20:2020 (E)

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 (S₂₀₀a) and Medium Temperature Smoke Control (S₂₀₀) 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

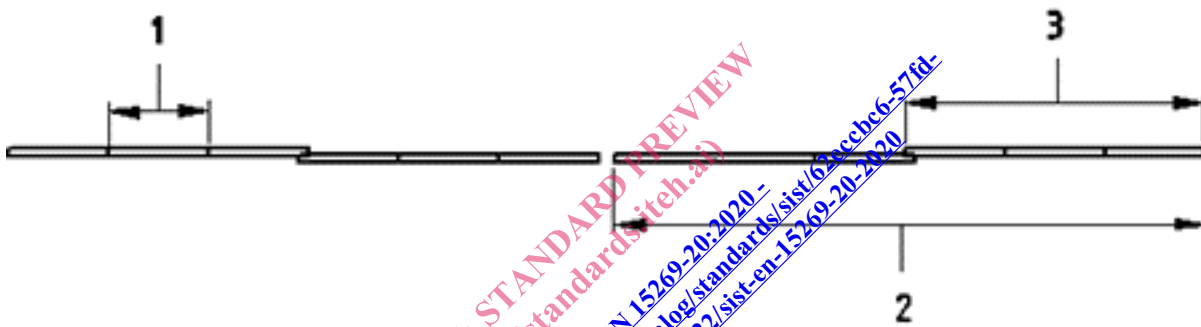
core

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

3.4**glazed panel**

glass infill in a framed door or a joinery door

3.5**properly sealed**

continuous and tight sealing of any joints or gaps with a gasket or permanently elastic sealing material or a tight constructional joint

3.6**element of building hardware**

synonym to "item of building hardware", means one piece of building hardware, e.g. a lock or a lever-handle

3.7**flexible supporting construction**

constructions with studs made of metal or timber with a full-faced lining at least on one side including constructions with structural steel work or timber structure in the core

4 Determination of the field of extended application**4.1 General**

In Clause 4, "doorset" stands for doors, shutters, operable fabric curtains and openable windows as well (which means for any kind of products mentioned in the scope).

4.1.1 Before there can be any consideration for extended application the doorset shall have been tested in accordance with EN 1634-3 to achieve a test result which could generate a classification in accordance with EN 13501-2 at least equal to the classification subsequently required from extended application consideration.

4.1.2 A review of the doorset 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 1634-3. However, this shall never lead to an increased classification for any specific parameter beyond that achieved during any one test.

4.1.3 All evaluations shall be made on the basis of retaining the classification obtained from testing to EN 1634-3.

4.1.4 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, if not tested. The test shall be performed from both sides Test scenario F.

4.1.5 Arrangements for hinged and pivoted doorsets incorporating side and/or overpanels are given in Annex B.

4.2 Procedure for evaluation

4.2.1 Identify the variations from the original 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 Tables A.1, A.2 or A.3.

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4.2.3 Establish from the contents of column (3) of Tables A.1, A.2 or A.3, whether any extended application is available 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 (3) in Tables A.1, A.2 or A.3.

4.2.5 Where the variations required can only be achieved from additional testing according to column (4), the additional test can be made on a similar specimen type to the original test against which the extended application is sought. Alternatively, column (3) in Tables A.1, A.2 or A.3 identifies an option for alternative testing and relevant test parameters.

4.3 Procedure for maximum field of extended application

4.3.1 It is possible to provide a limited field of extended application from the results of a single test. However, where a manufacturer intends to produce a range of doors incorporating single doors and also double doors with or without glazing, 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 minimize 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 Select specimens for the first tests in the series to ensure that the most important parameter variations for the manufactured products are covered.

4.3.4 Complete the first test or a series of tests and prepare a field of direct application and possibly a classification report from the results of the test(s).

4.3.5 Establish which of the original desired parameter variations have not been covered by the direct application and classification report.

4.3.6 Identify these parameter variations in Annex A and establish where an extended application is possible without further testing.

4.3.7 Record this for the extended application report together with any restrictions and rules given in column (4) in Tables A.1, A.2 or A.3.

4.3.8 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 4.3.7 above.

4.3.9 Select the required outstanding parameter variations from column (1) and column (2) of Tables A.1, A.2 or A.3 and observe from column (3) in Tables A.1, A.2 or A.3 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 tests completed in accordance with 4.3.9 above, an appropriate test or tests may be carried out with the additional product variations incorporated.

4.4 Interpretation of test results

4.4.1 In order to maximize the field of extended application, it is important that the test reports shall record details of any failure throughout the duration of the test.

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

4.4.3 Where it has been possible, to identify leakage due to a specific parameter, the extended application for all other construction parameter variations can be based on the performance achieved after isolating the parameter with excessive leakage.

5 Extended application report

Prepare an extended application report in accordance with the requirements 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 shall be presented in accordance with EN 13501-2.

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