SLOVENSKI STANDARD
oSIST prEN 15269-3:2020

01-december-2020

Razširjena uporaba rezultatov preskusov požarne odpornosti in/ali dimotesnosti za vrata, zaporne elemente in okna, ki se odpirajo, vključno z njihovim okovjem - 3. del: Požarna odpornost lesenih vrat in oken s tečaji

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 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows

Erweiterter Anwendungsbereich von Prüfergebnissen zur Feuerwiderstandsfähigkeit und/oder Rauchdichtigkeit von Türen, Toren und Fenstern einschließlich ihrer Baubeschläge - Teil 3: Feuerwiderstandsfähigkeit von Drehflügeltüren und Fenstern aus Holz

Ta slovenski standard je istoveten z: **prEN 15269-3**

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

oSIST prEN 15269-3:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
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ICS 13.220.50; 91.060.50

Will supersede EN 15269-3:2012

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 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 127.

If this draft becomes a European Standard, 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.

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

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European foreword

This document (prEN 15269-3:2020) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, the secretariat of which is held by BSI.

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

This document is one of a series entitled “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*” which consists of the following parts:

— *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;*

— *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;*

— *Part 9: Fire resistance of horizontally folding steel doorsets;*

— *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 document covers hinged or pivoted doorsets and door assemblies with timber based leaves, timber framed glazed doors and openable timber framed windows. Throughout this document the term "doorset" will be used to cover both doorsets and door assemblies. It prescribes the methodology for extending the application of test results obtained from fire resistance test(s) conducted in accordance with EN 1634-1. This document covers doorsets with internal structural elements which are comprised of timber.

Subject to the completion of the appropriate test or tests, 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) classification;

— glazed elements including vision panels and framed glazed doorsets,

— air transfer grilles (louvres and/or vents);

— side, transom or overpanels;

— items of building hardware;

— decorative and protective finishes;

— intumescent seals and non-intumescent (smoke, draught or acoustic) seals;

— alternative supporting construction(s).

This document does not cover horizontal doorsets.

The effect on the Classification 'C' for the doorsets following an extended application process is not addressed in this European Standard.

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 572-9, *Glass in buildings – Basic soda lime silicate glass products – Part 9: Evaluation of conformity/Product standard*

EN 844 (all parts), *Round and sawn timber — Terminology*EN 1125, *Building hardware — Panic exit devices operated by a horizontal bar, for use on escape routes — Requirements and test methods*

EN 1154, *Building hardware – Controlled door closing devices – Requirements and test methods*

EN 1155, *Building hardware – Electrical powered hold-open devices for swing doors – Requirements and test methods*

EN 1158, *Building hardware – Door coordinator devices – Requirements and test methods*

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

EN 1366-4, *Fire resistance tests for service installations — Part 4: Linear joint seals*

EN 1634-1, *Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware — Part 1: Fire resistance test for doors, shutters 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 1748-2-2, *Glass in building – Special basic products – Part 2-2: Glass ceramics - Evaluation of conformity/Product standard*

EN 1935, *Building hardware – Single-axis hinges – Requirements and test methods*

EN 12209, *Building hardware – Mechanically operated locks and locking plates – Requirements and test methods*

EN 12519, *Windows and pedestrian doors — Terminology*

EN 12765, *Classification of thermosetting wood adhesives for non-structural applications*

EN 13024-2, *Glass in building – Thermally toughened borosilicate safety glass – Part 2: Evaluation of conformity/Product standard*

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

EN 13986, *Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking*

EN 15254-4, *Extended application of results from fire resistance tests — Non-loadbearing walls — Part 4: Glazed constructions*

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*

prEN 15887: 2008, *Building hardware – Uncontrolled Door Closing Devices for single action doors – Requirements and test methods*

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 12519, EN ISO 13943, EN 1634-1, EN 1634-2 and EN 15269-1 and the following apply.

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

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

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
effective rebate depth
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 this dimension will be the rebate where the intumescent seal is fitted or, if no seal is fitted, the depth of the largest rebate (see Figure 1).

3.3
leaf symmetry
construction of a door leaf, without consideration of any leaf edge rebates, viewed either side of an imaginary plane drawn centrally in the thickness of the leaf

Note 1 to entry: A symmetrical door leaf will be identical either side of this imaginary plane, whilst an asymmetrical door leaf will differ.

3.4
exposed intumescent seal
intumescent seal which is fitted in the perimeter of the leaf or in the door frame and is visible when the leaf is in the open position

3.5
concealed intumescent seal
intumescent seal which is fitted in the perimeter of the leaf or in the door frame and is not visible when the leaf is in the open position, including seals behind veneers and laminates

3.6
decorative and/or protective finishes)
outer layer of material on the leaf or panel only used for decorative and/or protective, not for structural, purposes

3.7
structural facing
layer (or layers) of material between the core and the decorative and/or protective finishes (if fitted) in the leaf or panel used for structural purposes

3.8
lipping
edge piece added to the door leaf for structural purpose

Note 1 to entry: In this document, lippings' of more than 30 mm thickness are handled as a part of the leaf framing element. Lippings of less than 3 mm thick are handled as decorative finishes.

3.9
representative specimen / similar design / fundamentally the same
door leaf design can be considered as representative by having 'fundamentally the same' or 'similar' construction as another door leaf design for the purpose of evaluating parameter variations providing the relevant aspects of tested performance are considered

Note 1 to entry: see EN 15269-1 for further guidance on evaluation of similar/fundamentally the same

3.10
wood based product
wood based products for door leaf core, structural facings, perimeter framing and/or door frame are defined in EN 13986, e.g. MDF, plywood, LVL, LSL, OSB, particle board, flax boards.

4 Determination of the field of extended application

4.1 General

4.1.1 Before there can be any consideration for extended application, a representative doorset shall have been tested in accordance with EN 1634-1 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 considerations.

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 1634-1, including those lower than the test duration. However, this shall never lead to an increased classification for any specific parameter beyond that achieved during any one test, unless specifically identified in the relevant Construction Parameter Variation tables.

4.1.3 If, when following the extended application procedure, any part of the classified product cannot be covered by the extended application rules then that part shall be omitted from the subsequent extended application report and classification report.

4.2 How to use the extended application rules in Annex A

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 Annex A.

4.2.3 Establish from the contents of column (3) of Annex A whether any extended application is available beyond the direct application rules (DIAP) in EN 1634-1 without the need for further testing.

4.2.4 Where this is deemed to be possible, it can be recorded in the extended application report together with any appropriate restrictions and the stated rules from column (3) of Annex A.

4.2.5 Where the variations required can only be achieved from additional testing, the additional test should be made on a representative specimen type i.e. a doorset of the same or more onerous configuration. Alternatively, column (4) of Annex A identifies an option for alternative testing and relevant test parameters.

Most onerous configuration must be the one with the lowest relevant performance in terms of mode of failure and/or highest distortion but must also be evaluated taking the intended construction parameter variation(s) into account. For example if the construction parameter variation involves a change to glazing or side panel and over panel configurations then the previous result where these have been tested would need to be used to make the evaluation of most onerous. The result for a single unglazed doorset would not be suitable and can therefore be discounted when making the evaluation.

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 test. However, where a manufacturer envisages to manufacture a range of doors incorporating single doors and also double doors with or without side, transom or over panels, with or without glazing, louvres (ventilation/air transfer grilles), with alternative element of building hardware, etc., it is recommended that careful consideration is given to the complete range of doorset designs and options. This helps 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 tests in the series.

4.3.4 Conduct the first fire resistance test or a series of tests and then establish which of the original desired parameter variations have not been covered by the fire resistance 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 (3) in Annex A.

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, 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 tests or, in the weakest option, as defined in column 4 of Table A.2 to Table A.7, double leaf doorset configurations. See also Annex B.

4.3.9 Select the required outstanding parameter variations from column (1) and column (2) of Annex A and observe from column (4) in Annex A 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 4.3.8 and 4.3.9 above, then an appropriate test or tests may be repeated with the additional product variations incorporated.

4.4 Analysis of test results

4.4.1 In order to maximise the field of extended application, it is important that the test reports shall record details of any premature integrity and/or insulation failure, as well as details of any significant distortion.

4.4.2 Where a series of tests forms the basis for the extended application, the field of extended application shall be based on the lowest performance achieved from the complete series of tests unless premature failure has been attributed to one or more specific construction parameter variations.

4.4.3 Where it has been possible to clearly 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), provided the requirements of clause 4.1.1 is met. Where the specific Construction Parameter variation requires Category B performance and where failures can be identified as having no relevance to this aspect of the construction, they can be disregarded and the failure time and associated Category revised accordingly.

5 Extended application report

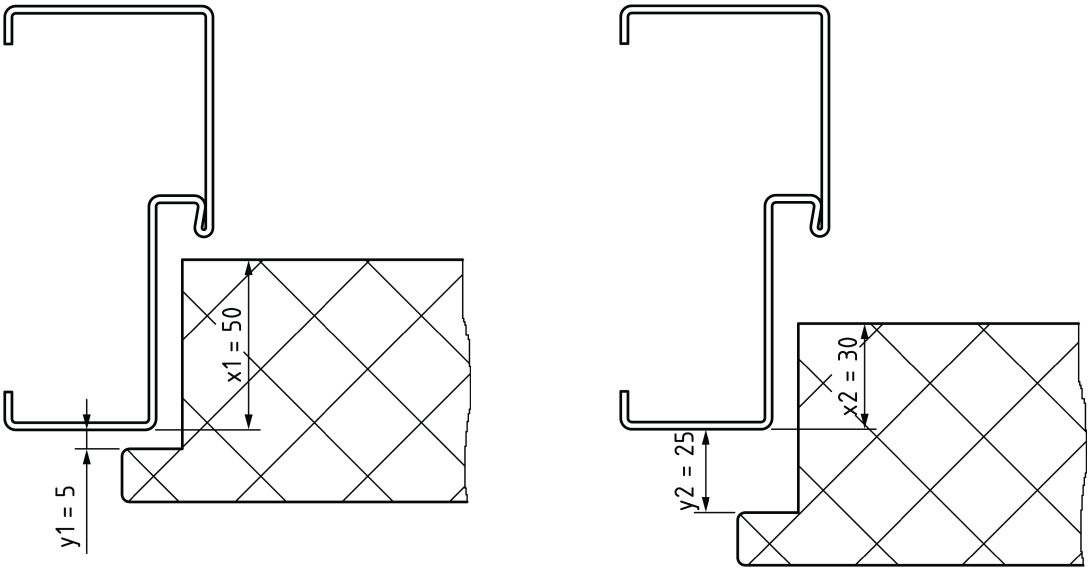
Prepare an extended application report in accordance with the requirements of Clause 6 of EN 15269-1:2019, based on the results of evaluations in accordance with the above.

When additional test data based on similar designs are used to extend the field of application, the rationale for using the test data should be mentioned in the EXAP report.

6 Classification report

The classification report shall be determined from the results of the extended application report and presented in accordance with EN 13501-2.

Dimensions in millimetres



Key

x1 Example of effective rebate depth in doorset to be tested
x2 Example of resulting effective rebate depth during testing after movement of 20mm
y1 Example of over rebate to frame face clearance in doorset to be tested
y2 Example of over rebate to frame face clearance in doorset after movement of 20mm

Figure 1 — Effective rebate depth

Annex A
(normative)

Construction parameter variations

This table is designed to be used by experts competent in the field of fire resistance testing of hinged or pivoted doorsets with timber based leaves.

This table shall only be used to assess a field of extended application when at least one positive fire resistance test to EN 1634-1 has generated a classification according to EN 13501-2. Only results from tests in accordance with European standards can be used as basis for extended application.

The first two columns identify possible variations to the construction details of the specimen tested.

For some parameters, it is necessary to evaluate whether the specimen displayed a high, medium or low level of distortion during the test. Where this is the case, the following levels shall be used to establish high, medium and low distortion doorsets as measured using the maximum relative movement at any position between the edge of the door leaf and door frame or between the meeting edges of door leaves or the relative movement of the framing members for panelled systems. The measurements shall be taken from the start of the test at any time during the complete required classification period. The deflections shall be measured at the positions given in EN 1634-1:

— Low: < 40 % of effective rebate depth;

— Medium: ≥ 40 % and ≤ 85 % of effective rebate depth;

— High: > 85 % of effective rebate depth.

The evaluation of the influence of a parameter variation on performance characteristics (E/EW/EI) lead to the judgement of the possibility of the extension of the field of application, the results of which are given in column 3. In certain cases in column 3, it is a requirement to achieve Category B; the requirements for this are given in EN 1634-1.

Where additional tests are deemed to be necessary, the type of specimen approved for incorporation of the changed parameter is defined in column 4 and Annex B. Where it is possible to use information from tests performed on one configuration for evidence on a different configuration, this allowance has been made in order to reduce the overall number of tests required for extended application evaluation e.g. single action doorsets to double action doorsets.

In order to maximize the possible field of extended application from a minimum number of tests, the parameter changes have been spread over a series of test specimens. The recommended tests for each parameter are dependant on the classification required and the preferred options.

Where more than a single parameter variation is required, the influence on other variations shall also be taken into account.

Solid timber can be replaced by other solid timber of the same group of equal or higher density or solid timber of a higher group, where Group 4 in Table A.1 is the highest group.

Table A.1 — Timber groupings

Group Nr.	Type of timber	Medium density [kg/m³]
1	Softwood	> 350 < 450
2	Hardwood	> 350 < 450
3	Softwood	≥ 450
3a	Beech (Fagus sylvatica)	
4	Hardwood	≥ 450

The following definitions are taken from EN 844, *Round and sawn timber — Terminology.*

Softwood

Wood of trees of the botanical group Gymnosperms

NOTE Most commercial softwoods belong to the group "conifers" which is a part of the botanical group Gymnosperms.

Hardwood

Wood of trees which represent one group of the Angiosperms known as the Dicotyledons

In table A.2 below, clause numbers in brackets represents the number of rule in the previous version of EN 15269-3. These are added for information only.

Table A.2 — Construction parameter variations – Section A – Door leaf

Construction Parameter	**Variation**	**Possibility of extension**	**Additional Evidence Required**
(1)	(2)	(3)	(4)
A Door leaf. *In certain cases, the rules given in Section A are also appropriate to side, transom and over panels or the door frame; where this is the case it is clearly indicated in column (1).* For double leaf doorsets, both leaves shall be of the same basic construction.			
A.1 General			
A.1.1 Number of leaves.	Single leaf from double leaf door test.	Possible for doorsets with exposed or without intumescent seals only and when the distortion of the leaf is low. In doorsets where there is an inactive and an active leaf, only the construction and parameters of the active leaf may be used for the single leaf doorset; otherwise not possible without additional test. Intumescent seals and their positioning shall be retained in the (primary) active leaf or positioned in the door frame if they were in the inactive leaf.	Annex B gives the test protocol and hierarchy for various options on leaf (and panel) configurations.
A.1.2 Number of leaves.	Double leaf from single leaf door test.	Not possible without additional test.	Annex B gives the test protocol and hierarchy for various options on leaf (and panel) configurations.