
Razširjena uporaba rezultatov preskusov požarne odpornosti in/ali dimotesnosti za vrata, zaporne elemente in okna, ki se odpirajo, vključno z njihovim okovjem - 6. del: Požarna odpornost lesenih drsnih vrat

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 6: Fire resistance of sliding timber doorsets

Erweiterter Anwendungsbereich von Prüfergebnissen zur Feuerwiderstandsfähigkeit und/oder Rauchdichtigkeit von Türen, Toren und Fenstern einschließlich ihrer Baubeschläge - Teil 6: Feuerwiderstandsfähigkeit von Schiebetüren aus Holz

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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 6 : Résistance au feu des blocs-portes coulissants

Ta slovenski standard je istoveten z: prEN 15269-6

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
91.190	Stavbna oprema	Building accessories

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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 6: Fire resistance of sliding timber
doorsets**

Application étendue des résultats d'essais en matière
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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 15269-6:2015) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

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

EN 15269-6 is part of a series entitled “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 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 10: Fire resistance of steel rolling shutter assemblies*
- *Part 11: Fire resistance of operable fabric curtains*
- *Part 20: Smoke control for hinged and pivoted timber and steel doorsets*

1 Scope

This European Standard covers horizontally sliding doorsets and hatches (single and double) with timber based leaves and timber framed glazed leaves. 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 standard covers doorsets with internal structural elements which are comprised of timber.

Subject to the completion of the appropriate test or tests selected from those identified in Clause 4, the extended application can cover all or some of the following non-exhaustive list:

- integrity (E), integrity/radiation (EW) or integrity/insulation (EI₁ or EI₂) classification;
- glazed elements and framed glazed doorsets;
- side, transom or overpanels;
- doorframe;
- suspension system;
- items of building hardware;
- decorative finishes;
- intumescent, smoke, draught or acoustic seals;
- alternative supporting construction(s).

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

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 12519, *Windows and pedestrian doors - Terminology*

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 ISO 13943, *Fire safety - Vocabulary (ISO 13943)*

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

EN 15269-1:2010, *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 15269-3, *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*

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 together with the following apply.

3.1

core

material fitted centrally within the thickness of a door leaf

Note 1 to entry: It 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 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.

3.3

facing (and decorative facing)

outer layer of material on the leaf or panel normally only used for decorative, not structural, purposes

3.4

subfacing

layer (or layers) of material between the core and the facing in the leaf or panel normally used for structural purposes

3.5

lipping

material on the door edge, limited to a thickness of 12 mm

Note 1 to entry: A 'Lipping' of more than 12 mm thickness is deemed to be a leaf framing element. Lippings of less than 3 mm thick are deemed to be a veneer.

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

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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 Table A.2.

4.2.3 Review the type of classification to be retained from column (3) of Table A.2 and establish from the contents of column (4) of Table A.2 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 it can be recorded in the extended application report together with any appropriate restrictions and the stated rules from column (4) of Table A.2.

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4.2.5 Where the variations required can only be achieved from additional testing, the additional test can be made on a similar specimen type i.e. a doorset of the same or more onerous configuration where the construction is fundamentally the same as tested but with the required outstanding parameter. Alternatively, column (5) of Table A.2 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 specimen(s) for the first test(s) in the series to ensure that the most important parameter variations for the manufactured products are covered.

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 (4) in Table A.2.

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 tests or in the weakest option double leaf doorset configurations. Column (5) of Table A.2 identifies an option for alternative testing and relevant test parameters.

4.3.9 Select the required outstanding parameter variations from column (1) and column (2) of Table A.2 and observe from column (5) in Table A.2 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 maximize the field of extended application, it is important that the test reports shall record details of any integrity and/or insulation failures throughout the test duration.

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 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 EN 15269-1:2010, Clause 6, 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 EN 13501-2.

Annex A (normative) Construction parameter variations

A.1 General

Table A.2 is designed to be used by experts competent in the field of fire resistance testing of horizontally sliding doorsets and hatches (single and double) with timber based leaves and timber framed glazed leaves.

The 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.

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

The type of classification achieved from the test can be identified from the 'Performance characteristic' section of the table column (3) as insulation, radiation control or integrity only.

The influence of variation on performance characteristic is identified in column (3) as, integrity, insulation or radiation (E, I or W respectively). The effect of the change in each parameter is evaluated for each characteristic in column (3) under E for effects on integrity, I for effects on insulation (whether an I1 or I2) and W for the effects on radiation control for EW doors.

These evaluations lead to the judgement of the possibility of the extension of the field of application the results of which are given in column (4). In certain cases in column 4, 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 (5). 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.

Sliding doors fixed at the mid-width of the supporting construction, opening into a pocket, are deemed to be symmetrical, i.e. one fire test is enough for a classification for fire resistance of both sides. Sliding doors fixed on one side of the supporting construction are deemed not to be symmetrical i.e. both sides shall be tested for a classification of both sides (see Figure A.1).

Column (5) defines the side of the door leaf which has to be tested. Inwards means a test with the load bearing components such as the runners/hanging mechanism, etc. on the fire side. Outwards means the opposite side. Both sides mean one test inwards and one test outwards. If column (5) does not define the side which has to be tested the test shall be made with the load bearing components inwards (see Figure A.1).

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/m ³]
1	Softwood and Beech (<i>Fagus sylvatica</i>)	> 350 < 450
2	Hardwood excluding Beech	> 350 < 450
3	Softwood	≥ 450
4	Hardwood excluding Beech	≥ 450

Definitions 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

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

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A.2 Construction parameter variations

Table A.2 – Key to symbols in column (3) (which is informative only)

- > - higher performance anticipated
- < - lower performance anticipated
- = - no significant change in performance anticipated
- ≥ - equal or higher performance anticipated
- ≤ - equal or lower performance anticipated
- >=< - the influence on performance could be worse, equal or better hence variations not possible unless specific, limited conditions are identified

Table A.2 – Construction parameter variations

Construction Parameter	Variation	Influence of variation on characteristic performance			Possibility of extension	Additional Evidence Required	
		E	I	W			
(1)	(2)	(3)			(4)	(5)	
A. Door leaf							
<i>The rules given in Section A are also appropriate to side, transom and overpanels. For double leaf doorsets, both leaves shall be of the same basic construction.</i>							
A.1 General							
A.1.1	Number of leaves	Single leaf from double leaf door test	≤	≤	≤	Not possible without additional test	Additional test on both sides with max. required size of door leaf
A.1.2	Number of leaves	Double leaf from single leaf door test	≤	≤	≤	Not possible without additional test	Additional test on both sides with max. required size of door leaf
A.1.3	Number of panels per leaf/element - See Figure A.2	add	≤	≤	≤	Possible up to 2 x of the number of panels of the tested specimen and providing the intended jointing technique has been incorporated in the	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf

Construction Parameter	Variation	Influence of variation on characteristic performance			Possibility of extension	Additional Evidence Required
(1)	(2)	(3)			(4)	(5)
		E	I	W		
					tested door specimen and only with regard to the rules given for size variation, otherwise not possible without additional test	doorset and vice versa.
A.1.4 Number of panels per leaf / element - See Figure A.2	Reduce	≤	≤	≤	Possible with regard to the rules given for size variation	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa.
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A.2 Size variations/single or multiple panel construction (standards.itech.ai)						
A.2.1 Size (area, width, height) of door leaf	Decrease	≤	≤	≤	Possible in line with direct application.	
A.2.2 Width of door leaf	Increase	≤	≤	≤	Possible in line with direct application, otherwise not possible without additional test	Additional test on both sides with max. required size of door leaf
A.2.3 Height of door leaf	Increase	≤	≤	≤	Possible in line with direct application, otherwise not possible without additional test	Additional test on both sides with max. required size of door leaf
A.2.4 Width of door leaf panel for a sliding door with more than one panel	Decrease	≤	≤	≤	Possible in line with direct application	
A.2.5 Width of door leaf panel for a sliding door with more than one panel	Increase	≤	≤	≤	Possible in line with direct application, otherwise not possible without additional test	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.2.6 Height of door leaf panel for a sliding door with more than one panel	Decrease	≤	≤	≤	Possible in line with direct application	

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Construction Parameter	Variation	Influence of variation on characteristic performance			Possibility of extension	Additional Evidence Required
(1)	(2)	(3)			(4)	(5)
		E	I	W		
A.2.7 Height of door leaf panel for a sliding door with more than one panel	Increase	≤	≤	≤	Possible in line with direct application, otherwise not possible without additional test	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.2.8 Area of door leaf panel for a sliding door with more than one panel	Increase	≤	≤	≤	Possible in line with rules for increase of the width and height of door panels which may be combined, otherwise not possible without an additional test	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.2.9 Area of door leaf	Increase	≤	≤	≤	Possible in line with direct application, otherwise not possible without an additional test	Additional test on both sides with max. required size of door leaf
A.2.10 Thickness of the door leaf – See Figures A.3 to A.8	Increase	≤	≤	≤	Possible in line with direct application and the position of any seal and intumescent material should remain in the same position in relation to the counter profile and a similar increase of the width of the overlapping if applicable, otherwise not possible without an additional test. For double leaf doorsets, both leaves shall be of the same thickness	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.2.11 Thickness of the door leaf	Decrease	≤	≤	≤	Not possible without an additional test	Additional test with max. required size of door leaf,
A.3 Meeting edge detail						
A.3.1 Meeting edge cross section	Change	≤	≤	≤	Possible in line with the rules for increase the leaf thickness The overlap can be increased but not decrease Otherwise not possible without additional test	Additional test with max. required size of door leaf

Construction Parameter	Variation	Influence of variation on characteristic performance			Possibility of extension	Additional Evidence Required
(1)	(2)	(3)			(4)	(5)
		E	I	W		
A.3.2 Astragal – See Figure A.9	Add.	≤	≤	≤	Possible for timber based material and material with reaction to fire class A1 or A2, otherwise not possible without additional test	Additional test with max. required size of door leaf
A.3.3 Astragal – See Figure A.9	Remove	≤	≤	≤	Not possible without additional test	Additional test on both sides with max. required size of door leaf
A.4 Materials and constructions						
A.4.1 Density of core material of leaf or panel. – See Figure A.9	Increase	≤	≤	≤	Possible providing the type of material remains as that tested and the leaf symmetry is not affected and the density of the core material does not increase by greater than 50 % and providing the overall weight of the leaf does not increase by more than 25 %, otherwise not possible without additional test.	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.4.2 Density of core material of leaf or panel. – See Figure A.9	Decrease	≤	≤	≤	Not possible without additional test	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.4.3 Thickness of core material or individual layers of core material in leaf or panel. – See Figure A.9	Increase	≤	≤	≤	Possible in line with direct application otherwise not possible without additional test	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa
A.4.4 Thickness of core material or individual layers of core material in leaf or panel. – See Figure A.9	Decrease	≤	≤	≤	Not possible without additional test	Additional test with max. required size of door leaf, a test on double leaf doorset covers single leaf doorset and vice versa