

Extended application in accordance with EN 15269-3:2012 Part 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows

Report number	2020-Efectis-R002303
Sponsor	Alprokon Aluminium B.V. P.O. Box 1160 2990 CA BARENDRECHT THE NETHERLANDS
Product Family	Alprokon draught seals types 250, 350, 450 and 550
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1. INTRODUCTION

1.1 GENERAL

This extended application concerns test results obtained in accordance with Test Method EN 1634-1:2014 + A1:2018.

The extended application process is carried out in conformity with the following extended application EN 15269-3:2012 – 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 door sets and openable timber framed windows.

This Extended Application report of product family Alprokon draught seals types 250, 350, 450 and 550 has been prepared in accordance with EN 15269-1:2019 and EN 15725:2010+C1:2012.

1.2 ACCREDITATION

Due to Dutch regulations, an Extended Application report cannot be issued under accreditation. Based on common practice agreed by the group of notified bodies Extended Application reports will be issued based on 2 criteria:

- 1) Is the EXAP performed by a laboratory that performed at least one of the supported tests
- 2) Is the laboratory who performed the EXAP accredited for the respective test standard.

For this report Efectis Netherlands fulfills both criteria.

1.3 SPONSOR & SUPPLIER

Sponsor and manufacturer
Alprokon Aluminium B.V.
P.O. Box 1160
2990 CA BARENDRECHT
THE NETHERLANDS

1.4 ISSUING LABORATORY

Laboratory
Efectis Nederland BV
Brandpuntlaan Zuid 16
2665 NZ BLEISWIJK
THE NETHERLANDS

1.5 REVISION INFORMATION

Issue	Date	Amendment
First	20-07-2021	N/A

1.6 INTENDED CLASSIFICATION

The extended application has been undertaken intended for classification:

E30, EI₁30 and EI₂30, and EW30.

1.7 NORMATIVE REFERENCES

European standard	Part
EN 1363-1:2020	Fire resistance tests – Part 1: General requirements
EN 1634-1:2014+ A1:2018	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 13501-2:2016	Fire classification of construction product and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services
EN 15269-1:2019	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 1: General requirements
EN 15269-3:2012	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.
EN 15725:2010+ C1:2012	Extended application reports on the fire performance of construction products and building elements

1.8 APPROVAL CO-SPONSOR FIRE RESISTANCE INVESTIGATION

The co-sponsor of the fire resistance tests, Van Vuuren Grou B.V., has approved the use of the test reports by Efectis Nederland B.V. in writing.

2. DETAILS OF THE PRODUCT

2.1 NATURE

2.1.1 Product Technical Specifications

Aluminium base profile with a seal and intumescent material

2.1.2 Product family

Based on figure 1 in chapter 7 can be concluded that profiles 350, 450 and 550 are within the same product family as profile 250 which has been tested. The dimensions, composition and type of the seal and the intumescent material has to be the same within the product family.

The product family is called:

Alprokon draught seals types 250, 350, 450 and 550.

2.1.3 Intended use

Fire resistant draft seal between door leaf and door frame or between two wooden door leaves.

2.1.4 End use application

Fire resistant draft seal between door leaf and door frame or between two wooden door leaves.

2.2 DESCRIPTION

2.2.1 General

A double action swing door set from Van Vuuren Grou B.V. mounted in de aperture of an aerated concrete supporting construction. Left door leaf opening from the furnace and right door opening towards the furnace.

3. EXTENDED APPLICATION REQUEST

The following extended application requests according to EN 15269-10 are assessed:

A. General

A.4. Materials and constructions

- A4.35 Dimension of draught seals: Increase
- A4.36 Dimension of draught seals: Decrease
- A4.37 Dimension/cross-section of draught seals: Increase
- A4.38 Dimension/cross-section of draught seals: Decrease.

4. TEST REPORTS AND TEST RESULTS IN SUPPORT OF THE EXTENDED APPLICATION

4.1.1 Test reports

Name of laboratory	Name of sponsor	Report ref. no	Test standard
Efectis Nederland BV	Alprokon Aluminium B.V.	2008-Efectis-R0252	EN 1634-1:2000

4.1.2 Test report: 2008-Efectis-R0252

Specifications	
Construction	Switch door
Test side	Left door leaf opening from the furnace and right door opening towards the furnace.
Supporting construction in accordance with EN 1363-1	Low density rigid construction: aerated concrete wall with density of 627 kg/m ³ , thickness 150 mm
Overall dimensions wall	4000 x 3000 mm (w x h)
Aperture	2000 x 2375 mm (w x h)
Door frame timber	Meranti 138 x 76 mm (w x d)
Frame rebate	25 x 50 mm (w x d)
Rebate / double action lath seals	Alprokon Aluminium type 250
Door leaf (each)	930 x 2325 x 38 mm (w x h x t)
Door leaf frame	Hardwood

Insulation	Flax-chip board
Glazing	Vetrotech swissflam lite EW30
Overall dimensions	500 x 500 x 37 mm (w x h x t)

Time reaching a criterion measured from start of test in accordance with EN 1634-1-2000

Criterion	Test results
Integrity (E)	34 minutes
Insulation (I)	34 minutes
Heat radiation (W)	34 minutes
The heating was terminated after 35 minutes in agreement with the client.	

5. EXTENDED APPLICATION

5.1 GENERAL

Efectis is of the opinion that Alprokon door profiles type 250, 350, 450 and 550 are draught seals according to EN 15269-3:2012. They are all part of the product family Alprokon draught seals types 250, 350, 450 and 550

5.1.1 Principles applied for the extension of the field of application

This extended application procedure is based on:

- Extended application standard EN 15269-3:2012

5.2 EXTENDED APPLICATION EN 15269-3:2012

5.2.1 Dimension of draught seals: Increase (art. A.4.35)

Construction parameter	Variation	Possibility of extension	Additional evidence required
(1)	(2)	(4)	(5)
A4. Materials and constructions			
A4.35 Dimension of draught seals: Increase			
Dimension of draught / smoke seals (Reaction to fire class A1 or A2); e.g. ceramic products (fitted in leaf or frame).	Increase	Possible providing the gap is not increased and the operation of any intumescent seal is not affected, otherwise not possible without an additional test.	Additional test to include the maximum size of seal.

Draught seal Alprokon 250 was tested. No information was received regarding the reaction to fire class of this profile. Therefor for the product family Alprokon draught seals types 250, 350, 450 and 550 and for classifications:

E30, EI₁30 and EI₂30, and EW30

No increase in dimensions is allowed.

5.2.2 Dimension of draught seals: Decrease (art A.4.36)

Construction parameter	Variation	Possibility of extension	Additional evidence required
(1)	(2)	(4)	(5)
A4. Materials and constructions			
A4.36 Dimension of draught seals: Decrease			
Dimension of draught / smoke seals (Reaction to fire class A1 or A2); e.g. ceramic products (fitted in leaf or frame).	Decrease	Not possible	Additional test to include the maximum size of seal.

Draught seal Alprokon 250 was tested. No information was received regarding the reaction to fire class of this profile. Therefor for the product family Alprokon draught seals types 250, 350, 450 and 550 and for classifications:

E30, EI₁30 and EI₂30, and EW30

No decrease in dimensions is allowed.

5.2.3 Dimension/cross-section of draught seals: Increase (art A.4.37)

Construction parameter	Variation	Possibility of extension	Additional evidence required
(1)	(2)	(4)	(5)
A4. Materials and constructions			
A4.37 Dimension/cross-section of draught seals: Increase			
Dimension/cross-section of draught / smoke seals (Reaction to fire class B-F) (fitted in leaf or frame).	Increase	Possible up to a maximum of 20 % and providing the gap is not increased and the operation of any intumescent seal is not affected, otherwise not possible without an additional test.	Additional test to include the maximum size of seal.

Draught seal Alprokon 250 was tested. No information was received regarding the reaction to fire class of this profile. Therefor the profile has a class F reaction to fire class. For the product family Alprokon draught seals types 250, 350, 450 and 550 and for classifications:

E30, EI₁30 and EI₂30, and EW30

Increase of the dimensions/cross section up to a maximum of 20% is allowed under the following conditions:

- The gap is not increased;
- The operation of any intumescent seal is not affected.

5.2.4 Dimension/cross-section of draught seals: Decrease (Art. A.4.38)

Construction parameter (1)	Variation (2)	Possibility of extension (4)	Additional evidence required (5)
A4. Materials and constructions			
A4.38 Dimension/cross-section of draught seals: Decrease			
Dimension of draught / smoke seals (Reaction to fire class B-F) (fitted in leaf or frame).	Decrease	Possible up to a maximum of 20 % and providing the gap is not increased and the operation of any intumescent seal is not affected, otherwise not possible without an additional test.	Additional test to include the minimum size of seal.

Draught seal Alprokon 250 was tested.

No information was received regarding the reaction to fire class of this profile.

Therefore the profile has a class F reaction to fire class.

For the product family Alprokon draught seals types 250, 350, 450 and 550 and for classifications:

E30, EI₁30 and EI₂30, and EW30

Decrease of the dimensions up to a maximum of 20% is allowed under the following conditions:

- The gap is not increased;
- The operation of any intumescent seal is not affected.

6. EXTENDED APPLICATION RESULTS

6.1 FIRE PERFORMANCE PARAMETERS

Summary of test results

Criterion	Time calculated from the start of the test until according to EN 1634-1: 2000 a criterion was reached.	
	EN 1634-1:2000	Criterion reached or not reached
a) Integrity – Cotton pad – Calipers – Flaming >10 sec.	35 minutes 35 minutes 34 minutes	Not reached Not reached Reached
b) Thermal insulation – Average temperature rise – Maximum temperature rise (I ₂) – Maximum temperature rise (I ₁) additional procedure – Heat radiation (W)	34 minutes 34 minutes 34 minutes 34 minutes	Reached through end of integrity Reached through end of integrity Reached through end of integrity Reached through end of integrity

6.2 GAP ANALYSIS

For this Exap-report to be used as a basis for classification according to EN 13501-2:2016 it is necessary to make a gap analysis to investigate if the reports of the tests that were performed according to the standard EN 1634-1:2000 are still valid for use according to the standard EN 1634-1:2014+A1:2018 as required by EN 13501-2:2016. Efectis made the comparison between the two versions of the EN 1634-1 standard and came to the conclusion that the result from the

test according to the EN 1634-1:2000 standard is still valid according to the standard EN 1634-1:2014+A1:2018 therefore these reports can be used for this Exap-report which can be the basis for classification according to EN 13501-2:2016

6.3 ADDITIONAL STATEMENTS

The extended application results relate to the behaviour of a product/product family or building element under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product/product family or building element in use.

This extended application is issued on the basis of test data and the content of the relevant part(s) of EN 15269 at the time of issue.



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7. FIGURE

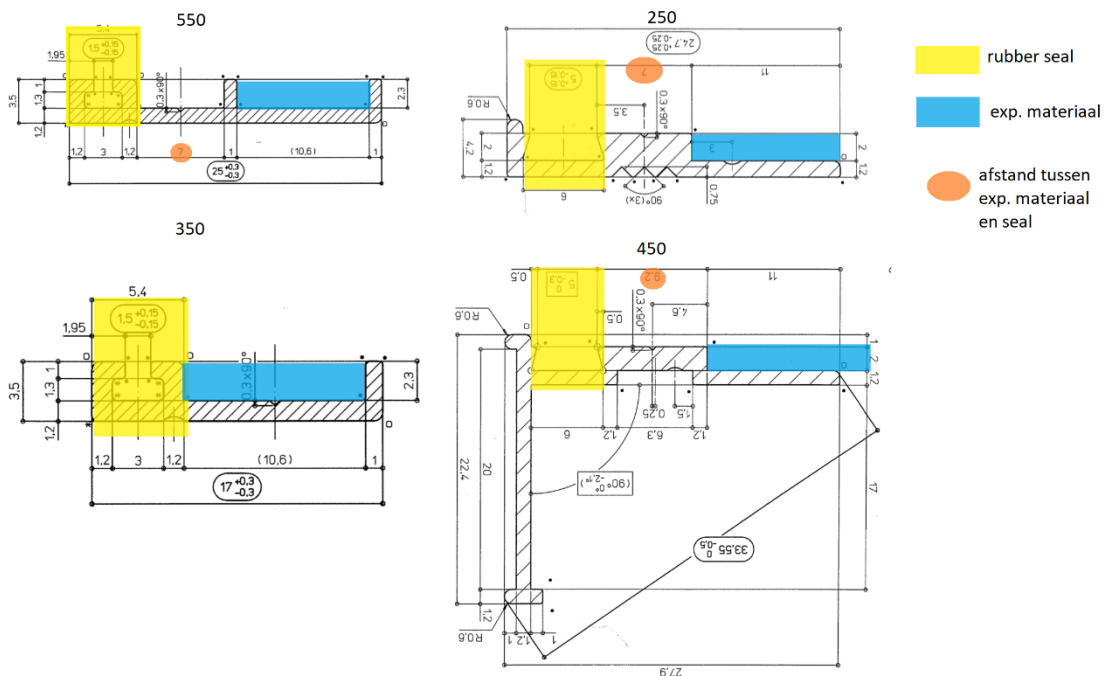


Figure 1: different profile types within the same product family (250 profile was tested)