

FIRE RESISTANCE EXPERT JUDGEMENT REPORT WITH CLASSIFICATION FIRES-JR-027-17-NURE Edition 2

Horizontal fire resistant shutter with loft ladder, type EI60 – 66/18 mm
Horizontal fire resistant shutter with loft ladder, type EI60 – 66/32 mm

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FIRE RESISTANCE EXPERT JUDGEMENT REPORT WITH CLASSIFICATION

FIRES-JR-027-17-NURE
Edition 2

Name of the product: Horizontal fire resistant shutter with loft ladder, type EI60 – 66/18 mm
Horizontal fire resistant shutter with loft ladder, type EI60 – 66/32 mm

Sponsor: OMAN Sp. z o.o.
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1. INTRODUCTION

This expert judgement report with classification defines the resistance to fire classification assigned to
Horizontal fire resistant shutter with loft ladder, type EI60 – 66/18 mm
Horizontal fire resistant shutter with loft ladder, type EI60 – 66/32 mm
in accordance with the classes given in EN 13501-2 : 2016.

Standard EN 1634-1: 2014 specifies a method for determining the fire resistance of door and shutter assemblies and openable windows designed for installation within openings incorporated in vertical separating elements. This standard does not comment the possibility of using this test method to determine the fire resistance of non-loadbearing horizontally oriented doors/shutters by analogy. As there is no test method to determine the fire resistance of such products, FIRES, s.r.o. chose EN 1634-1: 2014 during fire test [1] and also used paragraph 13 (of the standard) to define the field of application of test results.

This expert judgement expresses the opinion of the FIRES and is based on the experience or internal rules of FIRES.

This document is second edition of expert judgement report FIRES-JR-027-17-NURE issued by FIRES, s.r.o. on 14. 03. 2017.

Included changes

Previous text:

6.2 FIELD OF APPLICATION

This classification is valid for the following end use applications:

Supporting construction	<ul style="list-style-type: none"> - <i>Shutters are fixed to horizontal supporting construction in horizontal position at minimal 150 mm of thickness and with minimal bulk density 613 kg/m³.</i> - <i>Gap between shutter frame and supporting construction is filled by mineral wool with bulk density 60 kg/m³ and sealed from exposed side by PROMASEAL®-A</i>
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Changed text:

6.2 FIELD OF APPLICATION

This classification is valid for the following end use applications:

Supporting construction	<ul style="list-style-type: none"> - Shutters are fixed to horizontal rigid supporting construction in horizontal position at minimal 150 mm of thickness and with minimal bulk density 613 kg/m³. - Gap between shutter frame and supporting construction is filled by mineral wool with bulk density 60 kg/m³ and sealed from exposed side by PROMASEAL®-A
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This edition of the document supersedes previous editions of the expert judgement report.



2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The products, Horizontal fire resistant shutter with loft ladder, type EI60 – 66/18 mm and Horizontal fire resistant shutter with loft ladder, type EI60 – 66/32 mm, are defined as a shutter with fire separating function with fixing into the ceiling.

2.2 PRODUCT DESCRIPTION

Description of Horizontal fire resistant shutter with loft ladder, type EI60 in variant 1 as 66/18 mm and variant 2 as 66/32 mm:

Dimensions – variant 1

Overall dimensions of shutter	mm (height x width)
Dimensions of shutter leaf	mm (width x height x thickness)
Dimensions of shutter opening	mm (height x width)
Weight of shutter	kg (measured in testing laboratory)

Dimensions – variant 2

Overall dimensions of shutter	mm (height x width)
Dimensions of shutter leaf	mm (width x height x thickness)
Dimensions of shutter opening	mm (height x width)
Weight of shutter	kg (measured in testing laboratory)

Shutter frame

[Redacted text block]

[Redacted text block]

Construction of shutter leaf

Frame of shutter leaf

[Redacted text block]

[Redacted text block]

[Redacted text block]

Core of shutter leaf

[Redacted text block]

Casing of shutter leaf

[Redacted text block]



Intumescent tape

[REDACTED]

Hinges

[REDACTED]

Ladder

[REDACTED]

Products fixation

[REDACTED]

3. TEST REPORTS AND EXTENDED APPLICATION REPORTS IN SUPPORT OF CLASSIFICATION

3.1 TEST REPORTS AND EXTENDED APPLICATION REPORTS

No.	Name of laboratory	Name of sponsor	Test report No.	Date of the test	Test method
[1]	FIRES, s.r.o., Batizovce, SR	OMAN Sp. z o.o. Racibórz Poland	FIRES-FR- 031-17-AUNS	02.02.2017	EN 1634-1: 2014

[1] Test specimens were conditioned according to EN 1363-1 before the fire resistance test

3.2 TEST RESULTS

No./ Test method	Parameter	Results
[1] EN 1634-1: 2014	applied load	-
	supporting construction	Horizontal rigid supporting construction made by aerated concrete blocks of thickness 150 mm and with bulk density of 613 kg.m ⁻³ .
	temperature curve	standard temperature time curve
	loadbearing capacity	-
	integrity	cotton pad
		gap gauges
		sustained flaming
	thermal insulation	I ₁
		I ₂
	Radiation*	-
	mechanical action	-



No./ Test method	Parameter	Results
[1] EN 1634-1: 2014	operability	25 cycles
	Specimen orientation	opening of shutter towards test furnace (<i>fire from bottom side</i>), <i>ladder on unexposed side</i>
	applied load	-
	supporting construction	Horizontal rigid supporting construction made by aerated concrete blocks of thickness 150 mm and with bulk density of 613 kg.m ⁻³ .
	temperature curve	standard temperature time curve
	loadbearing capacity	-
	integrity	cotton pad
		gap gauges
		sustained flaming
	thermal insulation	I ₁
		I ₂
	radiation*	-
	mechanical action	-
	operability	25 cycles
	Specimen orientation	opening of shutter towards test furnace (<i>fire from bottom side</i>), <i>ladder side on unexposed side</i>

[1] The fire test was terminated in the 72nd minute. The test continued after the specimen No. 2 integrity failure in the 62nd minute at the request of test sponsor and was terminated after the specimen No. 1 integrity failure.

* Regarding to low temperatures on unexposed specimens surface below 300 °C the performance criteria of radiation is to be complied as satisfied.

Note



4. CHANGES OF THE PRODUCT OR END USE CONDITIONS OUTSIDE OF THE FIELD OF DIRECT OR EXTENDED APPLICATION

Following changes of the product or end use conditions were permitted:

1. EN 1634-1: 2014 used as a test method during test [1]. Field of application of test results determined acc. to EN 1634-1: 2014, paragraph 13.
2. Using similar types of ladders as has been used in test [1].

5. ARGUMENTS IN FAVOR OF THE EXTENSION

1. As there is no test method to determine the fire resistance of non-loadbearing horizontally oriented shutters, FIRES, s.r.o. chose EN 1634-1: 2014, a standard which deals with fire resistance of door and shutter assemblies and openable windows designed for installation within openings incorporated in vertical separating elements. Also field of application of test results defined in this fire resistance expert judgement report is elaborated in compliance with EN 1634-1: 2014, paragraph 13. On the base of long-term experience, FIRES, s.r.o. does not suppose that product changes (described in paragraph 6.2 of the document) allowed by EN 1634-1: 2014, paragraph 13 could lead to the decrease in fire resistance of product.
2. During the test [1] of the product variants 2 was ladder replaced by ■■■kg weights. Installation of ladder on unexposed side of loft shutter has no influence on fire resistance classification of product. Manufacturer is responsible that maximum weight of ladder is not greater than ■■■kg as it was during test [1].



6. CLASSIFICATION AND FIELD OF APPLICATION

6.1 CLASSIFICATION

The products, Horizontal fire resistant shutter with loft ladder, type EI60 – 66/18 mm and Horizontal fire resistant shutter with loft ladder, type EI60 – 66/32 mm, are classified according to the following combinations of performance parameters and classes as appropriate.

Fire resistance classification:
E 60 / EI₁ 60 / EI₂ 60 / EW 60

Note:

Classification is valid for both types of product, where a retractable ladder is on unexposed side.

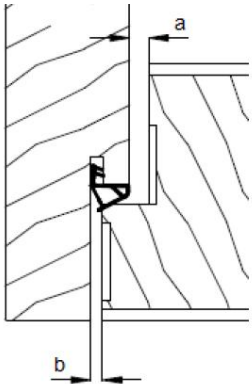
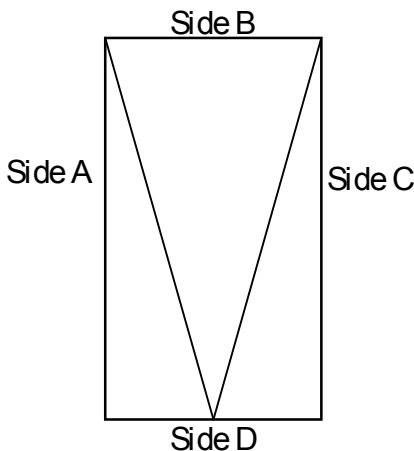
6.2 FIELD OF APPLICATION

This classification is valid for the following end use applications:

Materials and construction	<ul style="list-style-type: none"> - Thickness and/or density of shutter leaf shall not be reduced but should be increased provided the total increase in weight is not greater than 25%. - Stronger springs (of the same type as tested ones) are fitted to the product in order to ensure that force applied by springs responsible for closing the product (and also responsible for its remaining in closing position) is equal or higher than the force during the test [1]. - For timber based board products (e.g. particle board, blockboard etc.), the composition (e.g. type of resin) shall not change from that tested; the density shall not be reduced but may be increased. - The cross-sectional dimensions and/or the density of the timber frames (including rebates) shall not be reduced but may be increased. - The number, size, location and orientation of any joints in the timber framing shall not be changed.
Decorative finishes	<ul style="list-style-type: none"> - It is acceptable to apply paint finish. - Decorative laminates or timber veneers up to 1,5 mm of thickness are acceptable on faces but not the edges.
Fixings	<ul style="list-style-type: none"> - The number of fixings used to attach the product to supporting constructions may be increased but shall not be decreased and the distance between fixings may be reduced but shall not be increased. - Fixation into supporting construction is by means of steel screws (Ø6 x 80) mm in maximal distance of 400 mm.
Permissible size variations	<ul style="list-style-type: none"> - Product version 1 It is permitted to increase product dimension to maximally up to 15% length, 15% width and 20% area. - Product Version 2 No increases are allowed. - Unlimited reductions from the tested specimen are permitted.
Supporting construction	<ul style="list-style-type: none"> - Shutters are fixed to horizontal rigid supporting construction in horizontal position at minimal 150 mm of thickness and with minimal bulk density 613 kg/m³. - Gap between shutter frame and supporting construction is filled by mineral wool with bulk density 60 kg/m³ and sealed from exposed side by PROMASEAL®-A



Gaps	- The maximum size of primary gap “a” for products is restricted to the following sizes:		
		Product variant 1 [mm]	Product variant 2[mm]
	Gap on side A	7,3	6,3
	Gap on side B	7,9	6,6
	Gap on side C	7,1	7,7
	Gap on side D	6,3	6,5


7. LIMITATIONS

This classification document does not represent type approval or certification of the product.


The classification is valid until 14.03.2022 provided that the product, field of application and standards and regulations are not changed.

Approved:

Signed:


 Ing. Štefan Rástocký
 leader of the testing laboratory




 Ing. Miroslava Rákociová
 technician of the testing laboratory