
Title:

Classification report assigned to two hinged timber single leaf doors in accordance with the procedure given in the Standard UNE EN 13501-2:2019: "Fire classification of construction products and building elements. Part 2: Classification using data from fire resistance tests, excluding ventilation services" (equivalent to the EN 13501-2:2016).



Material classified:

- Two hinged timber single leaf doors with references 20/472-A and 20/472-B (references provided by the Laboratory).

File number: 20/21505-472-1 (EN)

This report, issued on 20th of November 2020, is the English version of the original Spanish report 20/21505-472
In the event of litigation, the original version will be valid.

Sponsor:

MIRILLAS ÓPTICAS, S.L.
Cuartel de Levante, 7
08150 Parets del Vallés
Barcelona

Report date:

20 November 2020

Test date:

04 March 2020

The reproduction of this document is only authorised if it is made in its totality. Electronically signed reports in digital format are considered original documents, as well as its electronic copies. Their printing has no legal validity.

This document includes 8 pages.

1.- INTRODUCTION

This fire resistance classification report, in accordance with the procedure given in the Standard UNE EN 13501-2:2019, defines the classification assigned to two hinged timber single leaf doors with reference:

Sample	Reference by Laboratory
Door A	20/472-A
Door B	20/472-B

2.- DETAILS OF THE ELEMENTS CLASSIFIED

2.1.- Type of function

The elements tested are defined as two hinged timber single leaf doors exposed to fire on one side (one door opens outwards the furnace and the other one opens inwards the furnace). Their function is to resist fire regarding the integrity and thermal insulation characteristics provided in section 5 of the Standard UNE EN 13501-2:2019.

2.2.- Description

A complete description of the elements tested is carried out in the test report, in which is based the classification defined in section 5 of this report.

3.- TEST REPORT

This classification report is based on the following test report:

File number: 20/21505-472 (EN)

Report issued on: 20 November 2020

Test date: 04 March 2020

4.- TEST RESULTS

4.1.- Test Standard:

UNE EN 1634-1:2016+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" (equivalent to the EN 1634-1:2014+A1:2018).

This Standard corresponds to the current version on test date. Results obtained in this test are the ones used in this classification report.

4.2.- EXPOSURE CONDITIONS

Temperature/time curve	$T = 345 \log_{10}(8t + 1) + 20$
Direction of the exposure	Door A opens outwards the furnace. Door B opens inwards the furnace.
Number of exposed sides	1 of each door.
Supporting conditions	Wall of perforated ceramic bricks of 140 mm thick, coated with mortar on the exposed side, total thickness of 150 mm and density of 1286 kg/m ³ (carried out by the Laboratory).

4.3.- TABLE OF RESULTS

Door A reference 20/472-A opening outwards the furnace (hinges outside the furnace).

	Minute of failure	Reason
Integrity	63	A sustained flame on the upper right corner of the door is observed.
Thermal insulation	63	Failure of the integrity criterion.

Door B reference 20/472-B opening inwards the furnace (hinges inside the furnace).

	Minute of failure	Reason
Integrity	-	Maintained throughout the course of the test, 66 minutes.
Thermal insulation	-	Maintained throughout the course of the test, 66 minutes.

5.- CLASSIFICATION

Pursuant to section 7.5 of the Standard UNE EN 13501-2:2019, the classification of the testes elements is as follows:

Door A:

Hinged timber single leaf door reference 20/472-A, opening outwards the furnace (hinges outside the furnace).	EI₂ 60
--	--------------------------

Door B:

Hinged timber single leaf door reference 20/472-B, opening inwards the furnace (hinges inside the furnace).	EI₂ 60
--	--------------------------

The decision rule taken to give declaration of conformity with the specification or standard consists in meeting the requirements when the result of the measurement does not exceed the specification limit.

Note: as indicated in section 13.3.2 of the Standard UNE EN 1634-1:2016 + A1:2018 and taking into account the results reflected in section 4.3 of this classification report, the category which corresponds to:

Samples	Classification	Category
20/472-A (Door A)	EI ₂ 60	A
20/472-B (Door B)	EI ₂ 60	A

6.- FIELD OF DIRECT APPLICATION

6.1 General (acc./section 13 of the UNE EN 1634-1:2016 + A1:2018).

The results of the fire test and the obtained classification are directly applicable to constructions equal to the models tested when one or more of the following modifications are made:

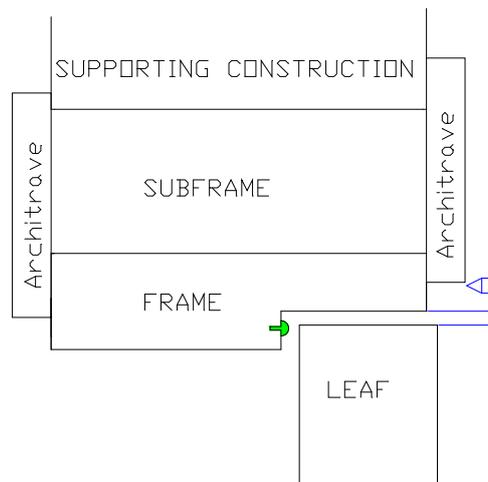
Characteristics	Reference of samples tested*	Modification permitted
Hardware	Peepholes by PEDRET; Mirillas Ópticas, S.L.: - Door A: o Super Eye (200°), code SELF(EI60);D. o Supervisor 14 (200°), code SWLF(EI60); D. o Angular 12 (170°); code C2F(EI60); CR. - Door B: o Super Eye (200°), code SELF(EI60);NM. o Supervisor 14 (200°), code SWLF(EI60); NM. o Angular 12 (170°); code C2F(EI60); NM. See section 3 of test report no. 20/21505-472 (EN) for further details.	- Not covered by direct application.
	- Interchange of hardware.	- Not covered by the field of direct application.
	- Lock ref. SI10F-4R60A001 by mcm, upper side of latch bolt placed at 1091 mm from the bottom side of the leaf of each door.	- Not covered by direct application.
	- Four hinges per door ref. TL1117LSS by Litto ASSA ABLOY, upper side of each one placed at 263, 937, 1640 and 1941 mm from the lower side of the leaf of each door.	- Permitted the increase in number but not the reduction in number.
	- One overhead door closer per door, serial Expert 2500; ref. AD2503S.PL by TELESCO, placed one on the upper left corner of the unexposed side of door A and exposed side of door B. Both door closers are engaged throughout the test.	- No changes are allowed.

<p>Materials/construction</p>	<p><u>Timber:</u></p> <p>Leaf (total th. 50 mm) (see distribution in report no. 20/21505-472 (EN)):</p> <ul style="list-style-type: none"> -MDF board, ref. Fibranor[®], th. 3 mm, dens. 825 kg/m³.; th. 2 mm, dens. 850 kg/m³. -Magnesium silicate board, ref. FIBRODICE MS, th. 3 mm. -Chipboard, ref. EUROSPAN[®] Flammex E1 P2 B/M1 CE by EGGER, th. 15 mm dens. 710 kg/m³. <p>- See composition of the perimeter lipping of the leaf in report no. 20/21505-472 (EN).</p> <p>Frame made up of:</p> <ul style="list-style-type: none"> -MDF board MDF, ref. Fibranor[®], sec. 30 x 95 mm (width x depth). -MDF board, ref. MEDILAND M1, sec. 19 x 55 mm (width x depth). <p>Subframe:</p> <ul style="list-style-type: none"> -Sweden red pine timber, sec. 40 x 150 mm (width x depth). <p>Architraves:</p> <ul style="list-style-type: none"> - MDF board, ref. MEDILAND M1, section 75 x 17 mm. <p>Weight of each door (frame not included):</p> <ul style="list-style-type: none"> Door A: 77.2 kg. Door B: 77.3 kg. <p>See section 3 of test report no. 20/21505-472 (EN) for further details.</p>	<ul style="list-style-type: none"> - The thickness of the door panel/s shall not be reduced but may be increased. - The door panel thickness and/or density may be increased provided the total increase in weight is not greater than 25%. - 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.
<p>Decorative finishes</p>	<ul style="list-style-type: none"> - Doors tested without paint finish. - Doors tested without decorative laminate. 	<ul style="list-style-type: none"> - Allowed to apply paints which do not contribute to the fire resistance on door leaves and frames. - Decorative laminates and timber veneers up to 1.5 mm thickness may be added to the faces (but not the edges) of doors that satisfy the insulation criteria (normal or supplementary procedure).

<p>Fixings</p>	<p>The subframe of each door is fixed to the supporting construction by means of 8 steel claws (crossed pairs) per door:</p> <ul style="list-style-type: none"> - Vertical lateral: centres placed at 300, 1070 and 1820 mm from the lower side of the subframe. - Upper horizontal: centres placed at 200 mm from the ends of the subframe. <p>See section 3 of test report no. 20/21505-472 (EN) for further details.</p>	<ul style="list-style-type: none"> - Not permitted the reduction of the number of fixings. - Not permitted the increase in distance between fixings. - Permitted the increase in the number of fixings. - Permitted the decrease in distance between fixings.
<p>Size variations¹</p>	<p><u>Door A:</u></p> <ul style="list-style-type: none"> - Hinged timber single leaf door, ref. 20/472-A. Classification 60 minutes. Category A. - Overall dimensions (architraves included): 1000 x 2110 mm (width x height). 	<ul style="list-style-type: none"> - Unlimited size reductions are permitted². - No size increase is permitted.
	<p><u>Door B:</u></p> <ul style="list-style-type: none"> - Hinged timber single leaf door, ref. 20/472-B. Classification 60 minutes. Category A. - Overall dimensions (architraves included): 1000 x 2110 mm (width x height). 	<ul style="list-style-type: none"> - Unlimited size reductions are permitted². - No size increase is permitted.
<p>¹ The number, size, location and orientation of any joints in the timber framing shall not be changed. Where decorative veneers of 1.5 mm or greater thickness, or other claddings which themselves provide constructive benefits, are part of the test specimen, they shall not be substituted with alternatives of lesser thickness or strength.</p>		
<p>² For smaller doorset sizes the relative positioning of movement restrictors shall remain the same as tested or any change to the distances between them will be limited to the same percentage reduction as the decrease of test specimen size.</p>		
<p>Supporting construction</p>	<ul style="list-style-type: none"> - Wall of perforated ceramic bricks, 140 mm thick, coated with mortar on the exposed side, total thickness of 150 mm and density 1286 kg/m³ (carried out by the Laboratory). 	<ul style="list-style-type: none"> - Applicable to other rigid supporting constructions with a density and thickness equal to or greater than the one tested. - Applicable to flexible supporting constructions⁴.

⁴ Only applicable if the fixing method used in each type of supporting construction are appropriate to that construction.

Gaps	<p><u>Door A:</u></p> <ul style="list-style-type: none"> - Hinged timber single leaf door ref. 20/472-A. (See gaps tested in test report no. 20/21505-472 (EN)). 	<p>Maximum size allowed for primary gaps:</p> <ul style="list-style-type: none"> - Between leaf and lintel (see DETAIL 1): A: 5.6 mm. - Between leaf and hinged lateral (see DETAIL 1): A: 4.9 mm. - Between leaf and lock side (see DETAIL 1): A: 6.3 mm. - Between leaf and floor: 7.5 mm. <p>Permitted the reduction of the minimum size of the primary gaps.</p>
	<p><u>Door B:</u></p> <ul style="list-style-type: none"> - Hinged timber single leaf door ref. 20/472-B. (See gaps tested in test report no. 20/21505-472 (EN)). 	<p>Maximum size allowed for primary gaps:</p> <ul style="list-style-type: none"> - Between leaf and lintel (see DETAIL 1): A: 5.6 mm. - Between leaf and hinged lateral (see DETAIL 1): A: 3.3 mm. - Between leaf and lock side (see DETAIL 1): A: 6.1 mm. - Between leaf and floor: 7.0 mm. <p>Permitted the reduction of the minimum size of the primary gaps.</p>



DETAIL 1

* The reference values of the samples tested not indicated in this section are described in section 3 Samples testes of file number 20/21505-472 (EN).

The modifications permitted in the field of direct application are based on data provided by the sponsor. LGAI Technological Center S.A. is not responsible for this documentation and/or information.

The period of validity is the one stated in the product certification system.

This document cannot be considered either a type approval or a certification of the product.

Fire Laboratory Responsible
LGA Technological Center, S.A.

The results of the tests carried out refer only and exclusively to the sample tested, and in the moment and under the conditions indicated herein.

LGA Technological Center, S.A. is not responsible for the information supplied by the sponsor.

Service Quality Guarantee

Applus+, guarantees that this task has been carried out following the exigencies of our Quality and Sustainability System, complying with the contractual conditions and legal regulation.

Within the framework of our improvement programme, we appreciate any comment you may deem appropriate, addressing them to the responsible who signs this document or to the Quality Director of Applus+, to the e-mail address: satisfaccion.cliente@applus.com