Razón Social / FUNDACIÓN TECNALIA RESEARCH & INNOVATION Nº F-69 Registro de Fundaciones del Gobierno Vasco CIF G48975767

CLASSIFICATION REPORT No. 112604-001-2-a

CUSTOMER	SUSPENSIONES ELÁSTICAS DEL NORTE, S.L. (SENOR)
ADDRESS	POL. IND. EL GARROTAL, PARCELA 10, MODULOS 4 Y 5 14700 PALMA DEL RIO CORDOBA SPAIN
PURPOSE	FIRE RESISTANCE CLASSIFICATION ACCORDING TO STANDARD EN 13501-2:2023
TESTED SAMPLE (*)	FLEXIBLE PARTITION REF. **"3PPF15+M90 LM/600+SE-9600+M90 LM/600+3PPF15"**
RECEPTION DATE	15.05.2024
TEST DATE	23.05.2024
ISSUE DATE	20.09.2024
TRANSLATION DATE	09.10.2024

Technical Manager
EÑAUT AGUIRREGABIRIA GUERETA - 44333389S Firmado digitalmente por EÑAUT AGUIRREGABIRIA GUERETA - 44333389S Fecha: 2024.10.09 15:36:46 +02'00'
Eñaut Aguirregabiria

TECNALIA LAB SERVICES

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1. INTRODUCTION

This classification report defines the fire resistance classification assigned to a non-loadbearing wall referenced as **"3PPF15+ M90+ SE-9600+M90 LM/600+3PPF15"** in accordance with the procedures established in [C].

1.1 REFERENCE STANDARDS

[A] *EN 1363-1:2020 "Fire resistance tests – Part 1: General requirements".*

[B] *EN 1364-1:2015 "Fire resistance tests for non-loadbearing elements. Part 1: Walls".*

[C] *EN 13501-2:2023 "Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance and/or smoke control tests, excluding ventilation services".*

2. DETAILS OF CLASSIFIED ELEMENT

2.1 GENERAL INFORMATION

The sample referenced as **"3PPF15+ M90+ SE-9600+M90 LM/600+3PPF15"** is defined as a non-loadbearing, fire resistant wall as defined in [C] 7.5.2.

2.2. DESCRIPTION OF THE SAMPLES

The element, a non-loadbearing wall referenced as **"3PPF15+M90+SE-9600+M90 LM/600+3PPF15"** is fully described below or in the test reports that support this classification, which are listed in Section 3.1.

The main descriptive characteristics were provided by the applicant.

This information is included in Annex 4 (*) of the test report mentioned in Section 3.1 of this document.

The verification of the sample was carried out during its assembly.

Materials used (*)

- Framing:

Designation	Make, model	Material	Cross-section (mm)	Thickness (mm)
[C]	PLACO RAIL 90, Ref.MEH84203000	Galvanised steel	30/90/30	0.55
[M]	PLACO MONTANTE 90 Ref.MEH84502990	Galvanised steel	39/88.5/41	0.6

- Spring system / Shock absorber:

Designation	Make, model	Material	Dimensions (mm)
[A]	SENOR SE-9600-TBM2	Shock absorber	Total length: 260 Sheet thickness: 1.5

- Acoustic strip:

Designation	Make, model	Material	Dimensions (mm)
[B1]	Acoustic strip, SENOR SE-BEC 10x135	CR140 micro cellular EPDM sheet	Width: 125 Thickness: 10
[B2]	SENOR SE-MONT-BICAPA 40	EPDM + cross-linked polyethylene insulation strip	Width: 40 Thickness: 5.5

- Bolts:

Designation	Make, model	Material	Diameter (mm)	Length (mm)
[T1]	SENOR SE-TAV-500/11A	Elastic separator	29/36.5	34.5
[T2]	SENOR SE-TAV-500/11R	Elastic separator	29/36.5	34.5
[T3]	PLACO TTPC 25 screw Ref.TOH86000025	Self-tapping screw	3.5	25
[T4]	PLACO TTPC 45 screw Ref.TOH86000045	Self-tapping screw	3.5	45

[T5]	PLACO TTPC 70 Screw Ref.TOH86000070	Self-tapping screw	4.2	70
[T6]	FISHER DUOPOWER 6x30	Plastic plug	6	30
[T7]	TRPF 13 Ref.TOH86130000	Self-tapping sheet metal screw	-	13

- Board:

Designation	Make, model	Material	Weight (kg/m^2)	Dimensions (mm)
[P]	PLACO PPF BA15 Ref.P03593000	Fire-break laminated gypsum board	12.5	1200x3000x15

- Insulation:

Designation	Make, model	Material	Dimensions (mm)
[LM]	ISOVER ARENA APTA Ref.KD10991	Mineral wool	1350x600 Thickness: 90

- Joint filler:

Designation	Make, model	Material	Characteristics
[Pa]	PLACO PR1	Powdered gypsum jointing paste + additives	25 kg bag

- Joint tape for joint treatment:

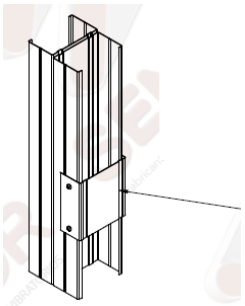
Designation	Make, model	Material	Dimensions (mm)
[Ci]	PLACO GR RLX	Microperforated Paper Joint Tape	Width: 50

Definition of sample

Partition made of a double metal structure of galvanised sheet steel consisting of standards [M] and rails [C], placed 245 mm from the centres of the rails. The vertical standards are reinforced in an "H" shape by joining the rear of two standards with screws [T7] every 400 mm.

Two EPDM sheets [B1] are fixed around the entire perimeter of the sample (except for the free lateral edge) with a gap of 155 mm between the two sheets. The lower rails [C] on the EPDM sheets [B1] are fixed to the floor with plastic plugs [T6] and self-tapping screws [T5] every 700 mm. The elastic spacer (blue) [T1] is incorporated in these fixings.
The upper rails [C] on the EPDM sheets [B1] are fastened to the ceiling with plastic plugs [T6] and self-tapping screws [T5] every 600 mm. The elastic spacer (red) [T1] is incorporated in these fixings. The standard of the fixed edge [M] on the EPDM sheets [B1] is fastened to the side frame edge with plastic plugs [T6] and self-tapping screws [T5] every 600 mm. The elastic spacer (blue) [T1] is incorporated in these fixings.

The H-shaped standards are then installed, connected together with sheet metal screws [T7] at a distance of 600 mm. Small pieces of rail are fixed to these standards at the height of the shock absorbers that connect the double structure. (See detail 1). Shock absorbers [A] are installed by means of [T7] fixings, 6 shock absorbers in total distributed at 1500mm and 2500mm from the floor on two standards and 2000mm from the floor on another two standards.



Rail 90 section screwed to the vertical face of the upright for the support and correct fixing of the joint damper.

(Detail 1).

Finally, an insulation strip [B2] is placed on the two front sides of the profiles that will be in contact with the gypsum boards.

The inside of the double profile is made of mineral wool insulation [LM].

Three layers of 15mm gypsum board [P] are installed on each side of the double profile, forming a partition wall with a final width of 425mm.

The first layer is fixed to the standards using self-tapping screws [T3] with a distance of 500 mm between screws, on the sides of each board and in the centre, coinciding with the metal structure. The second layer is fixed to the standards using self-tapping screws [T4] with a distance of 500 mm between screws on the sides of each board and in the centre, coinciding with the metal structure. Both the first and second layers end perimetrically against the EPDM sheet [B1]. The assembly of the second board is identical to the first one, except that in this case longer screws [T4] are used and screws [T5] are used in the third one, but this final board is not supported by the EPDM sheet [B1]. The third layer is fixed to the standards using self-tapping screws [T5] with a distance of 250 mm between screws on the sides of each board and in the centre, coinciding with the metal structure. All layers of gypsum boards are installed with the joints butting up against each other on each side, and in turn with the joints butting up against the opposite side.

On each layer, all of the joints between boards are fixed with filler [Pa1] and joint tape [Ci]. The screw heads of all boards are filled [Pa] and the perimeter of the sample is coated with the same paste [Pa].

The end joints shall be made according to the sketch. A horizontal joint is made 500 mm from the upper edge of the sample.

The tested sample was (3000 x 3000) mm in size, with a motion-free edge.

Assembly

Sample assembly was entirely performed by the customer.

No additions were made to the sample subsequent to the laboratory review.

In accordance with [B] 6.3.4, one of the vertical sides of the assembly was not fixed, leaving a gap of 25 mm between the sample side and the test frame, which was filled with a flexible fireproof material.

For further information, refer to the construction details in Annex 1 of the test report included in Section 3.1 of this report.

3. TEST REPORT AND TEST RESULTS SUPPORTING THE CLASSIFICATION

3.1 TEST REPORTS

Laboratory name	Applicant's name	Report reference No.	Test method	Direction of test	Test date
TECNALIA RESEARCH & INNOVATION	*SUSPENSIONES ELÁSTICAS DEL NORTE, S.L.*	*112604-001-1-a*	*[B]*	*Symmetrical sample exposed on one side*	*23.05.2024*

3.2 RESULTS

Test results

		"3PPF15+M90 LM/600+SE-9600+M90 LM/600+3PPF15"
Integrity (E)		**222 min**
Performance criterion		
Cotton pad	Flaming or glowing of the cotton pad.	222 min(1)
Gauge Ø 6 mm	Openings in the sample which allow the gauge to move more than 150 mm along the opening.	222 min
Gauge Ø 25 mm	Openings in the sample allowing the gauge to pass through.	222 min(1)
Sustained flaming > 10 s	Appearance of sustained flaming on the unexposed side of the sample for more than 10 s.	222 min(1)
Insulation (I)		**222 min**
Performance criterion		
Maximum temperature	Not exceeding the initial temperature of each thermocouple by more than 180 ºC.	222 min(1)
Average temperature	Initial average temperature of thermocouples TR1 to TR5 not to be exceeded by 140 ºC.	222 min(1)

(1): The measurement is stopped if a gap of more than Ø 6 mm and 150 mm occurs.

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1. CLASSIFICATION REFERENCE

This classification was carried out in accordance with [C] Clause 7.

4.2. CLASSIFICATION

According to [C], the wall referenced as **"3PPF15+M90 LM/600+SE-9600+M90 LM/600+3PPF15"** has the following classification:

EI								**180**	

E								**180**	

Fire Resistance Classification: EI 180

4.3 DIRECT FIELD OF APPLICATION

The direct field of application of the test results refers to those changes that can be made on a sample after a fire resistance test with a satisfactory result. These variations can be entered automatically without the need for the applicant to obtain additional evaluations, calculations or approvals.

Parameter	Permitted variation	Tested sample
General outer dimensions.	Reduction in height	(3000x3000) mm
	Increase in wall thickness	425 mm of total thickness: 3 x 15 mm gypsum boards + double structure with 90 mm profiles + 3 x 15 mm gypsum boards.
	Unlimited increase in width, maintaining the tested construction system	To maximum dimensions (3000 mm) and with a free moving edge.
	Increase in height allowed up to 1.0 m more	Tested at a height of 3000 mm without supporting construction. The maximum deformation does not exceed 100 mm. The thermal expansion tolerances are increased proportionately.
Component dimensions.	Reduce linear dimensions of the panels except for the thickness	Panels 1200 mm in width and 3000 mm in height.
	Increase in thickness of constituting materials	Board thickness: 15 mm Channel/rail thickness: 0.55 mm Standard thickness: 0.60 mm Mineral wool thickness: 90 mm.
Construction details.	Reduce the distance between studs	600 mm between studs
	Increase the number of horizontal joints of the same type to that tested, whereby a joint is tested at 500 +/- 150 mm from the upper part of the wall	Horizontal joint on the unexposed side placed 500 mm from the upper edge of the wall.

	Increase quantity of vertical joints of the same type as the one tested	Continuous vertical joints
	Reduce the distance between fastenings.	First layer of boards placed every 500 mm on both sides of the structure Second layer of boards placed every 500 mm on both sides of the structure Third layer of boards placed every 250 mm on both sides of the structure Lower rails fixed to the structure every 700 mm. Upper rails fixed to the structure every 600 mm. Fixed edge standard secured to the structure every 600 mm.
Supporting construction.	Valid for securing to high density supporting constructions: ≥ 850 kg/m^3.	Tested without supporting construction.

Any modifications that have not been expressly included in the sections above will not be considered for the purpose of possible changes without due additional express approval.

5. LIMITATIONS

This classification report does not represent any sort of product approval or certification.