CLASSIFICATION REPORT No. 119750-001-5

CLIENT	Técnicas Expansivas S.L.
ADDRESS	POLÍGONO INDUSTRIAL LA PORTALADA II. C/ SEGADOR 13. 26006 LOGROÑO (LA RIOJA) ESPAÑA
PURPOSE	FIRE RESISTANCE CLASSIFICATION REPORT ACCORDING TO EN 13501-2:2023
TEST SPECIMEN	LINEAR JOINT SEALS **REF.(*)« PU-FP: ESPUMA DE POLIURETANO FIRESTOP »**
RECEPTION DATE	15.10.2025
TEST DATES	20.11.2025
ISSUE DATE	09.03.2026

Technical responsible
EÑAUT AGUIRREGABIRIA GUERETA - 44333389S Firmado digitalmente por EÑAUT AGUIRREGABIRIA GUERETA - 44333389S Fecha: 2026.03.09 15:33:16 +01'00'
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TECNALIA LAB SERVICES

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1. INTRODUCTION

This classification report defines the fire resistance classification assigned to linear joint seals referenced as **« PU-FP: ESPUMA DE POLIURETANO FIRESTOP »** 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 1366-4:2021 "Fire resistance tests for service installations - Part 4: Linear joint seals".*

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

2. DETAILS OF THE CLASSIFIED ELEMENT

2.1. GENERAL INFORMATION

The samples referenced as **« PU-FP: ESPUMA DE POLIURETANO FIRESTOP »** are defined as a linear joint seals as stated in [C] 7.5.8.

2.2 SAMPLE DESCRIPTION

The elements, linear joint seals with reference **« PU-FP: ESPUMA DE POLIURETANO FIRESTOP »** are fully described below or in the test report that support this classification 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 listed in Section 3.1.

Sample position (*)

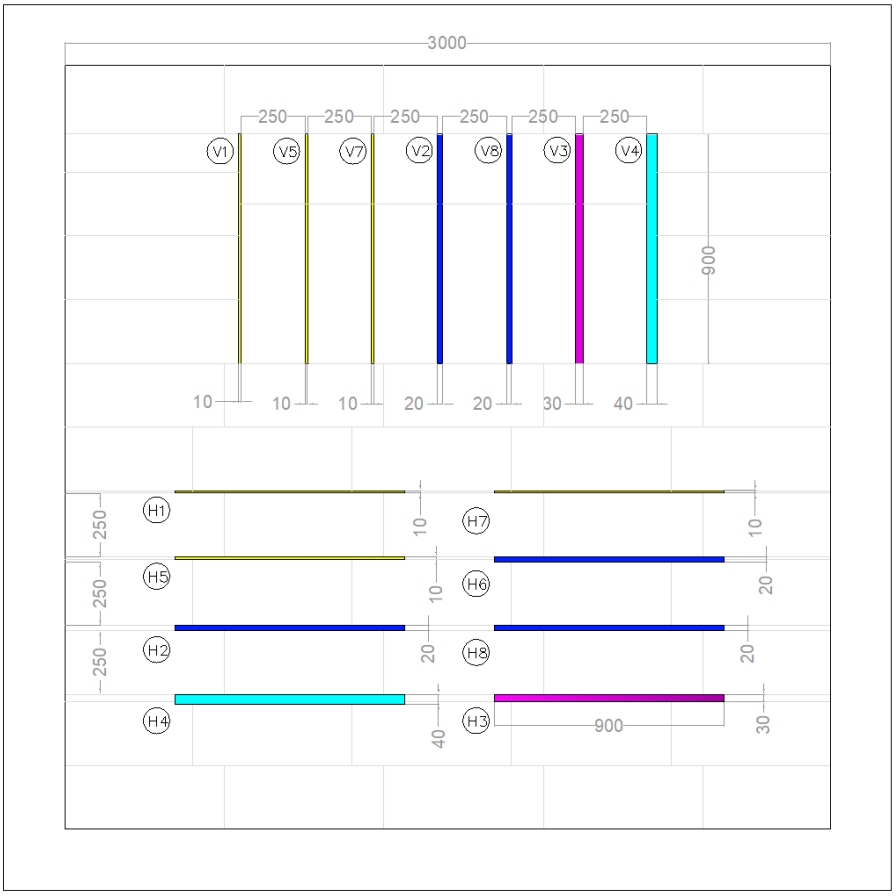


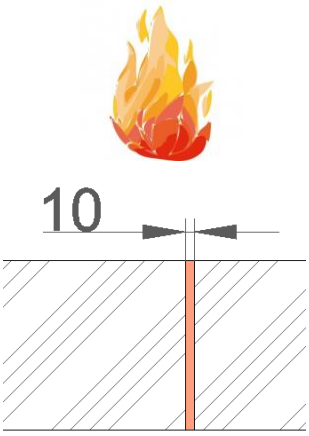
Figure 1: Configuration of the samples in the test frame, non exposed side.

LINEAR JOINT	ORIENTATION	DESCRIPTION
V1	vertical	10 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
V2	vertical	20 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
V3	vertical	30 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
V4	vertical	40 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
H1	horizontal	10 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
H2	horizontal	20 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
H3	horizontal	30 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
H4	horizontal	40 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

Description of the samples (*):

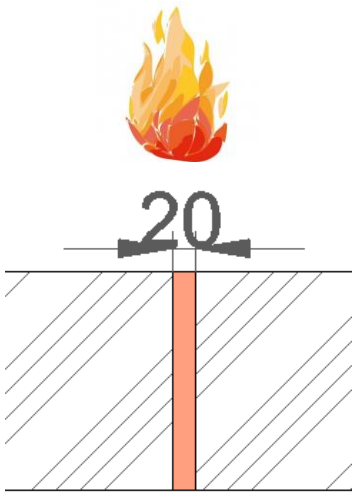
«Linear joint sealing V1»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	10
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Vertical
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



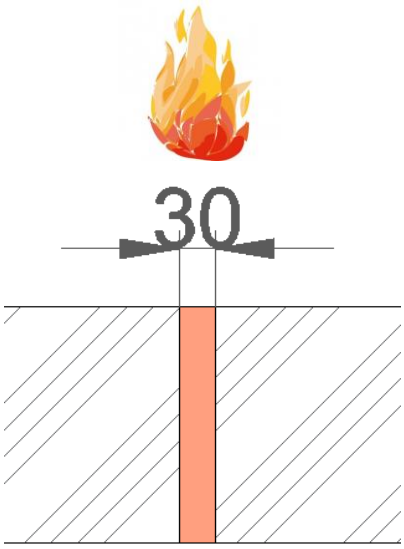
«Linear joint sealing V2»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	20
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Vertical
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



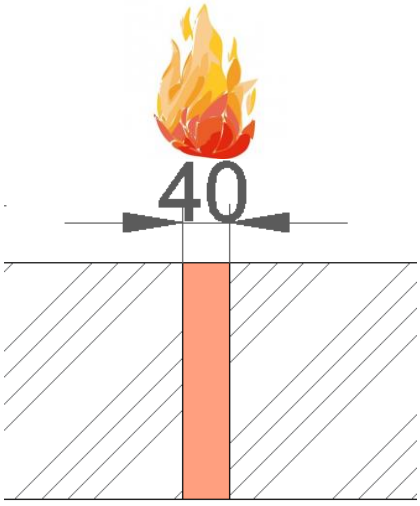
«Linear joint sealing V3»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	30
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Vertical
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



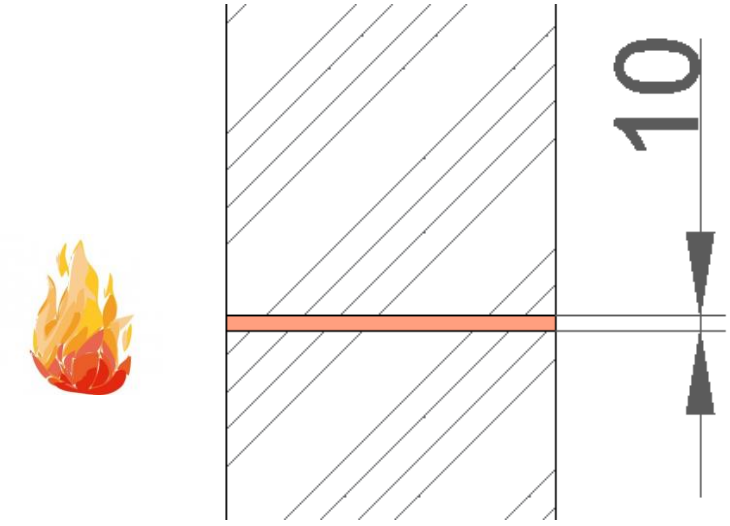
«Linear joint sealing V4»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	40
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Vertical
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



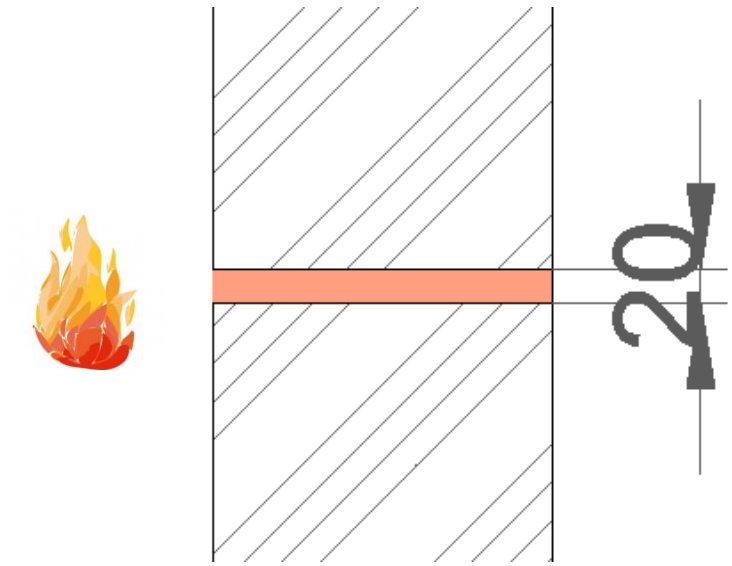
«Linear joint sealing H1»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	10
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Horizontal
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



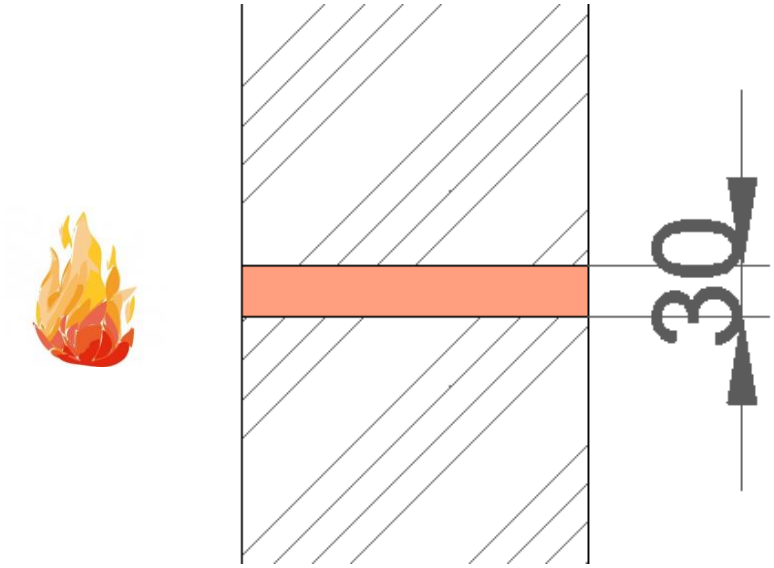
«Linear joint sealing H2»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	20
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Horizontal
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



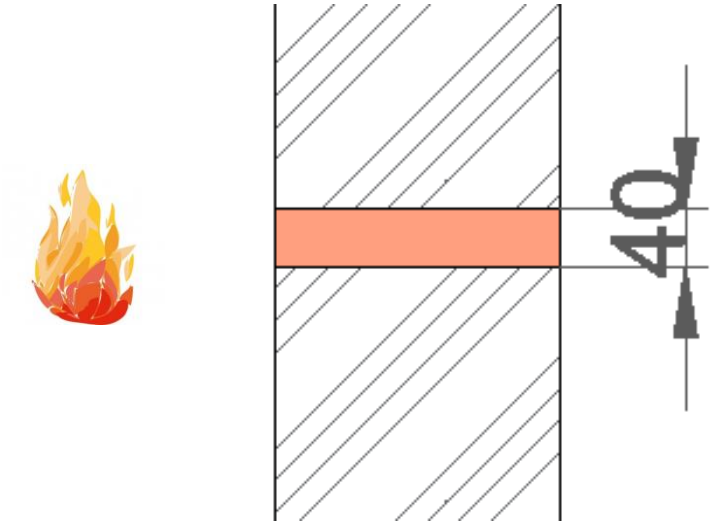
«Linear joint sealing H3»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	30
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Horizontal
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



«Linear joint sealing H4»

Type:	Linear joint installed in all the depth of the support construction (see below detail) composed by PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Reference	PU-FP: ESPUMA DE POLIURETANO FIRESTOP
Application method	Applied by cartridge pistol.
Width of the joint (mm)	40
Depth of the joint (mm)	200
Length of the joint (mm)	900
Orientation of the joint	Horizontal
Type of bottom seal	None
Depth of bottom seal (mm)	None
Fire exposed direction	Symmetrical specimen exposed in one side.



Assembly

The assembly of the specimen was entirely realized by the client.

End date of specimen's assembly: 04.11.2025

No subsequence additions of service facilities were made to the specimens.

For further information refer to the construction details in Annex 1 of the test report listed 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	Test date
TECNALIA RESEARCH & INNOVATION	*Técnicas Expansivas S.L.*	*119750-001-1*	*[B]*	*20.11.2025*

3.2 RESULTS

		"Linear joint V1"	"Linear joint V2"
Integrity (E)		**240 min**	**223 min**
Performance criterion			
Cotton pad	Flaming or glowing of the cotton pad.	240 min(2)	223 min(1)
Sustained flaming > 10 s	Sustained flaming on the unexposed side of the sample for more than 10 s.	240 min(2)	223 min(1)
Insulation (I)		**240 min**	**223 min**
Performance criterion			
Maximum temperature	Not exceeding the initial temperature of each thermocouple by 180ºC	240 min(2)	223 min(1)

(1): Measurement for this criterion was interrupted due to integrity failure, sustained flame.
(2): Measurement for this criterion was interrupted due to request of the client to stop the test.

		"Linear joint V3"	"Linear joint V4"
Integrity (E)		**134 min**	**109 min**
Performance criterion			
Cotton pad	Flaming or glowing of the cotton pad.	134 min(1)	109 min(1)
Sustained flaming > 10 s	Sustained flaming on the unexposed side of the sample for more than 10 s.	134 min	109 min
Insulation (I)		**134 min**	**109 min**
Performance criterion			
Maximum temperature	Not exceeding the initial temperature of each thermocouple by 180ºC	134 min(1)	109 min(1)

(1): Measurement for this criterion was interrupted due to integrity failure, sustained flame.

		"Linear joint H1"	"Linear joint H2"
Integrity (E)		**240 min**	**240 min**
Performance criterion			
Cotton pad	Flaming or glowing of the cotton pad.	240 min(1)	240 min(1)
Sustained flaming > 10 s	Sustained flaming on the unexposed side of the sample for more than 10 s.	240 min(1)	240 min(1)
Insulation (I)		**240 min**	**240 min**
Performance criterion			
Maximum temperature	Not exceeding the initial temperature of each thermocouple by 180ºC	240 min(1)	240 min(1)

(1): Measurement for this criterion was interrupted due to request of the client to stop the test.

		"Linear joint H3"	"Linear joint H4"
Integrity (E)		**154 min**	**126 min**
Performance criterion			
Cotton pad	Flaming or glowing of the cotton pad.	154 min(1)	126 min(1)
Sustained flaming > 10 s	Sustained flaming on the unexposed side of the sample for more than 10 s.	154 min	126 min
Insulation (I)		**154 min**	**126 min**
Performance criterion			
Maximum temperature	Not exceeding the initial temperature of each thermocouple by 180ºC	154 min(1)	126 min(1)

(1): Measurement for this criterion was interrupted due to integrity failure, sustained flame.

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 CLASSIFICATION REFERENCE

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

4.2. CLASSIFICATION

According to [C], the linear joint seals referenced as **« PU-FP: ESPUMA DE POLIURETANO FIRESTOP »** was granted the following classification:

V1: 10 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

EI									**240**
E									**240**

Fire Resistance Classification: EI 240-V-X-F-W 10 to W 10

V2: 20 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

EI								**180**	
E								**180**	

Fire Resistance Classification: EI 180-V-X-F-W 10 to W 20

V3: 30 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

EI							**120**		
E							**120**		

Fire Resistance Classification: EI 120-V-X-F-W 10 to W 30

V4: 40 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

EI						**90**			
E						**90**			

Fire Resistance Classification: EI 90-V-X-F-W 10 to W 40

H1: 10 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
H2: 20 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

EI									**240**
E									**240**

Fire Resistance Classification: EI 240-T-X-F-W 10 to W 20

H3: 30 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP
H4: 40 mm x 200 mm PU-FP: ESPUMA DE POLIURETANO FIRESTOP

EI							**120**		
E							**120**		

Fire Resistance Classification: EI 120-T-X-F-W 10 to W 40

4.3 DIRECT FIELD OF APPLICATION

The direct field of application of the test results refers to those changes that can be carried out 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
Support construction.	Rigid construction made of aerated concrete, concrete, blockwork and masonry with equal or higher density and thickness	Thickness: 200 mm. Density: 550 kg/m^3.
General dimensions	Increase of the depth of sealing. Decrease of the width of joint.	Depth of 200 mm. Joints V1, H1: width of 10 mm Joints V2, H2: width of 20 mm Joints V3 and H3: width of 30 mm. Joints V4 and H4: width of 40 mm

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 approvals.

5. LIMITATIONS

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