

designated according to Article 29 of the Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment, www.eota.eu)

European Technical Assessment

**ETA 22/0771
of 22/08/2023**

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: UL International (Netherlands) B.V.

Trade name of the construction product

Protecta FR Board / FR Flexi-Board

Product family to which the construction product belongs

Fire Stopping and Sealing Product:
• Linear Joint and Gap Seals

Manufacturer

Polyseam Ltd
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Huddersfield, West Yorkshire
HD1 6SB, UK
www.protecta.co.uk

Manufacturing plant(s)

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Huddersfield, West Yorkshire
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This European Technical Assessment contains

15 pages including 1 Annex which forms an integral part of this assessment.

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

EAD 350141-00-1106, September 2017.

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

- 1) Protecta FR Board / FR Flexi-Board is a coated mineral wool board used to form linear gap seals where gaps are present. The intended use of Protecta FR Board / FR Flexi-Board is to reinstate the fire resistance performance of floor to floor/ floor to wall joints and wall gaps. Typical locations of linear joints include floors, the perimeter of floors, walls, ceilings and roofs.
- 2) The Protecta FR Board is supplied coated on one face, referenced 1-S, or on both faces, referenced 2-S. Cut the required board(s) to suit the linear gap dimensions (see Annex A). All exposed and cut edges of the board can be sealed with Protecta FR Coating or Protecta FR Acrylic prior to fitting which will act as an adhesive (optional). The board(s) must be friction fitted into the gaps with a tight fit. All joints, gaps or imperfections in the installed seal must be filled with Protecta FR Acrylic on the coated exposed side(s) of the board(s).
- 3) Polyseam Ltd submitted a written declaration that Protecta FR Board / FR Flexi-Board does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

- 4) The use category of Protecta FR Board / FR Flexi-Board in relation to BWR 3 (Hygiene, health and environment) is IA1, S/W2

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350141-00-1106

Detailed information and data is given in Annex A.

- 1) The intended use of Protecta FR Board / FR Flexi-Board is to reinstate the fire resistance performance of gaps in and joints between rigid floors and between rigid floors and rigid wall constructions, gaps in and joints between rigid floor constructions.
- 2) The specific elements of construction that the system Protecta FR Board / FR Flexi-Board may be used to provide a linear joint or gap seal in, are as follows:
 - a) Rigid floors: The floor must have a minimum thickness of 150 mm and comprise aerated concrete, concrete, blockwork or masonry with a minimum density of 650 kg/m³.
 - b) Rigid walls: The wall must have a minimum thickness of 100 mm and comprise concrete, aerated concrete blockwork or masonry, with a minimum density of 650 kg/m³.

- c) Flexible walls: The wall must have a minimum thickness of 100 mm and comprise steel or timber studs* lined on both faces with minimum 2 layers of 12.5 mm thick boards. Apertures are not required to be lined. Flexible wall solutions may also be used in rigid walls, with a minimum density of 350 kg/m³.

* no part of the penetration seal may be closer than 100 mm to a stud, the cavity must be closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. (for details see Annex A)

- 3) The system Protecta FR Board / FR Flexi-Board may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex A).
- 4) The maximum permitted joint/gap width for system Protecta FR Board / FR Flexi-Board is 600 mm.
- 5) The maximum movement capability of system Protecta FR Board / FR Flexi-Board is $\leq 7.5\%$
- 6) Precautions are required to be taken to prevent a person stepping onto a horizontal linear joint seal or falling against a vertical, or sloped, linear joint seal.
- 7) The provisions made in this European Technical Assessment are based on an assumed working life of the Protecta FR Board / FR Flexi-Board of 25 years, provided that the conditions laid down in the product datasheet for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, or the Technical Assessment Body but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.
- 8) Use category: Type Y₁: Intended for use at temperatures below 0°C with exposure to UV but no exposure to rain. Includes lower classes Y₂, Z₁, Z₂.

3 Performance of the product and references to the methods used for its assessment

Product-type: Fire Rated Board		Intended use: Linear Joint & Gap Seal
Basic requirement for construction work	Essential characteristic	Performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	D – s1, d0
EN 13501-2	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use categories: IA1, S/W2 Declaration of manufacturer
EN 1026:2000	Air permeability (material property)	Annex B
EAD 350141-00-1106, Annex C & EN 12390-8	Water permeability (material property)	No performance determined
BWR 4 Safety in use		
EOTA TR 001:2003	Mechanical resistance and stability #	Pass
EOTA TR 001:2003	Resistance to impact/movement	No performance determined
EOTA TR 001:2003 ISO 11600 & EAD 350141-00-1106, Clause 2.2.13	Adhesion	No performance determined
EAD 350141-00-1106, Clause 2.2.12	Durability	Y ₁
EAD 350141-00-1106, Clause 2.2.13	Movement capacity	No performance determined
EAD 350141-00-1106, Clause 2.2.14	Cycling of perimeter seals for curtain walls	No performance determined
EAD 350141-00-1106, Clause 2.2.15	Compression set	No performance determined
EAD 350141-00-1106, Clause 2.2.16	Linear expansion on setting	No performance determined
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation*	R _w (C;Ctr) = 55 (-1;-1) dB
BWR 6 Energy economy and heat retention		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined
* Protecta FR Board 50mm 2-S # Impact tests were conducted with single Protecta FR Board 50mm 2-S and is relevant for 50mm FR Board or thicker		

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, (see <https://eur-lex.europa.eu/oj/direct-access.html>) of the European Commission¹, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Tasks of the manufacturer:

Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this European Technical Assessment.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this European Technical Assessment.

The factory production control shall be in accordance with the Control Plan of 7th February 2023 relating to the European Technical Assessment ETA 22/0771 issued on 22/08/2023 which is part of the technical documentation of this European Technical Assessment. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (Netherlands) B.V.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

¹ Official Journal of the European Communities L178/52 of 14/7/1999

Other tasks of the manufacturer:

Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

(a) Technical data sheet:

- Field of application:
- Building elements for which the penetration seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the penetration seal
- Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- Services which the penetration seal is suitable, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings (e.g. pipe trays)

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

6 Issued on:

28th August 2023

Report by:



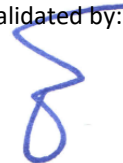
D. Yates
Staff Engineer
Built Environment

Verified by:



C. Johnson
Senior Staff Engineer
Built Environment

Validated by:



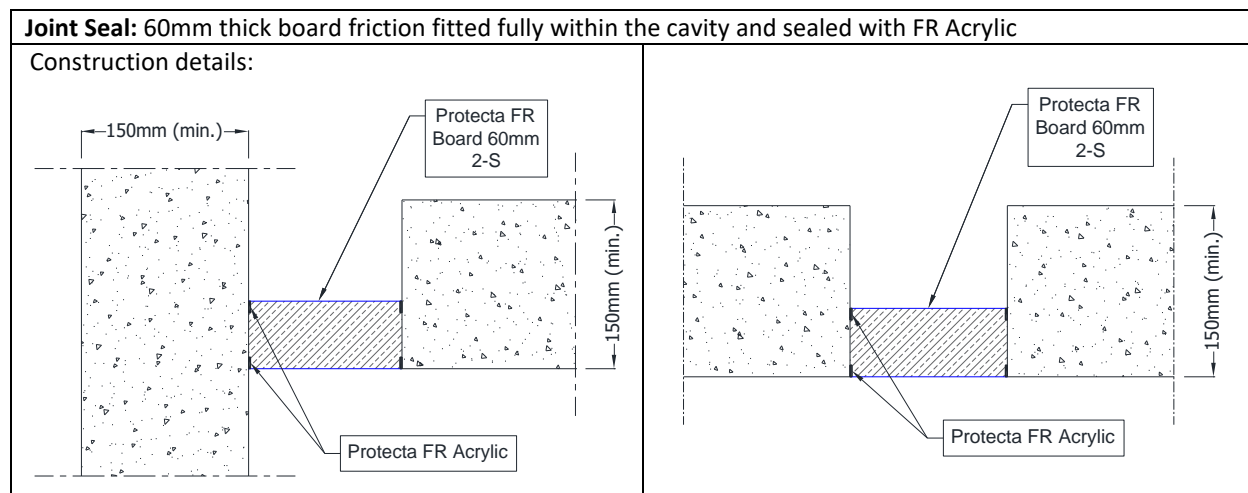
Erik Teubler
Head of TAB
Built Environment

For and on behalf of UL International (Netherlands) B.V.

ANNEX A – Resistance to Fire Classification – Protecta FR Board / FR Flexi-Board

A.1 Rigid floor constructions with thickness of minimum 150 mm

A.1.1 Linear joints in a horizontal construction, horizontal linear joints in a vertical construction and horizontal floor joints abutting a wall



A.1.1.1

Substrate	Depth (mm)	Backing	Classification *
masonry/ concrete	Sealed at the joint and along the top and bottom edges with FR Acrylic	60 mm FR Board 2-S, at any position	E 240 – H – X – F – W120 EI 120 – H – X – F – W120
masonry/ concrete/ aluminium	Sealed at the joint and along the edges on the top and bottom edges with FR Acrylic	60 mm FR Board 2-S, at any position	E 120 – H – X – F – W300 EI 60 – H – X – F – W300 ¹
masonry/ concrete/ aluminium/ steel		60 mm FR Board 2-S, top face position	E 120 – H – X – F – W600 (For EI performance recorded on the seal only, please see note ² below)

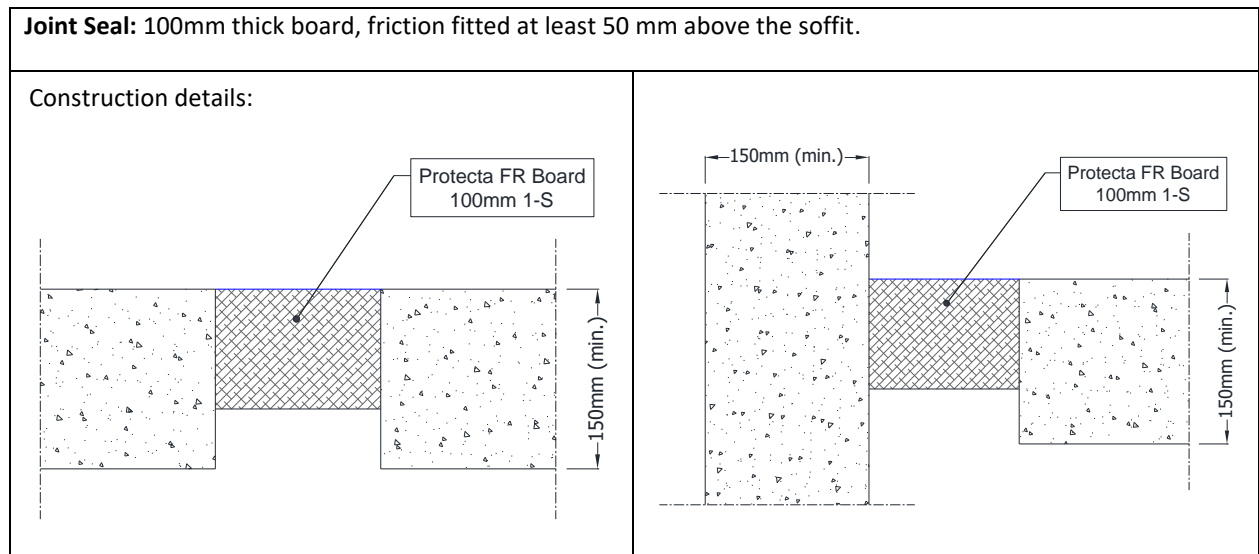
*Additional and for information only.

The classifications provided in Table A.1.1.1 consider the insulation performance of all components within the firestopping system as per the requirements of EN 1366-4. This includes temperature evaluation of the metal substrates.

In relation to each of the above classifications, temperatures recorded on the seal (exclusive of the supporting construction) exceeded the maximum allowable after the following times (rounded down):

¹ 90, ² 120

A.1.2 Linear joints in a horizontal construction, horizontal linear joints in a vertical construction and horizontal floor joints abutting a wall



A.1.2.1

Substrate	Boards	Classification *
masonry/ concrete	1 x 100 mm FR Board 1-S, friction fitted	E 240 – H – X – F – W120 EI 180 – H – X – F – W120
masonry/ concrete	1 x 100 mm FR Board 1-S, friction fitted	E 240 – H – X – F – W200 EI 240 – H – X – F – W200
masonry/ concrete/ aluminium/ steel		E 240 – H – X – F – W200 EI 15 – H – X – F – W200 ¹

*Additional and for information only.

The classifications provided in Table A.1.2.1 consider the insulation performance of all components within the firestopping system as per the requirements of EN 1366-4. This includes temperature evaluation of the metal substrates.

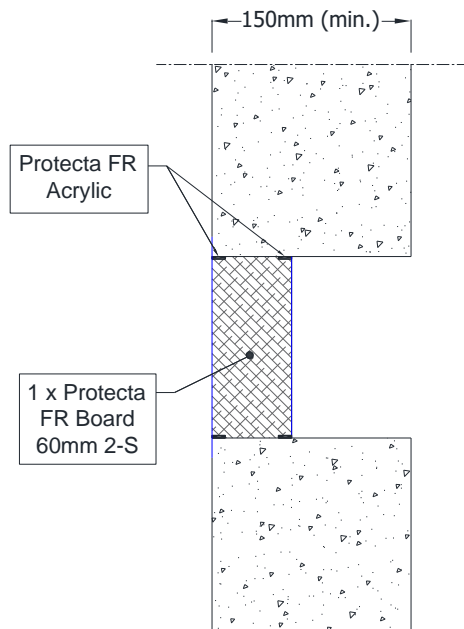
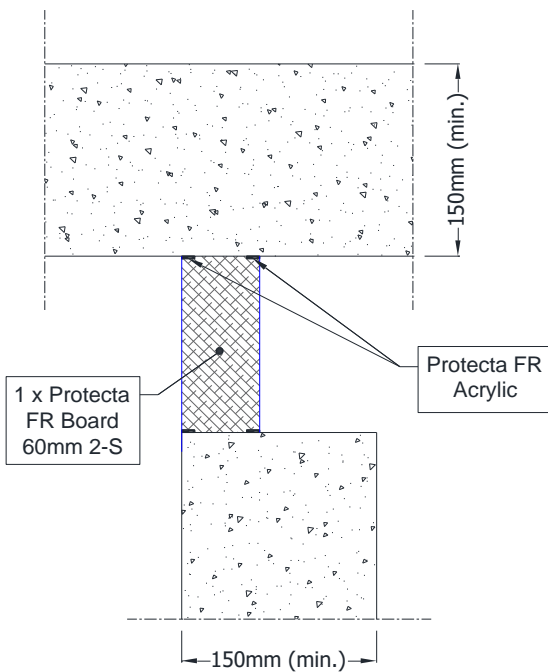
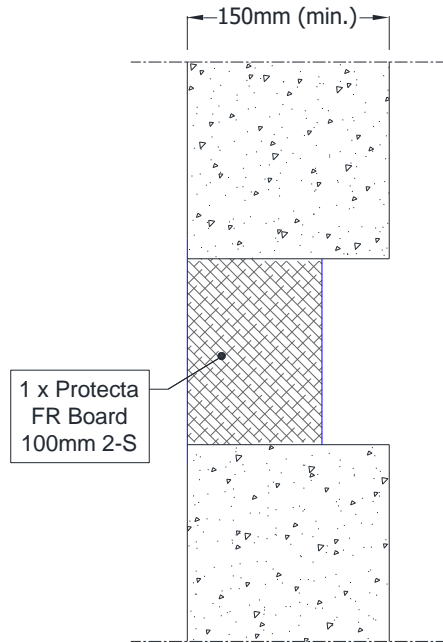
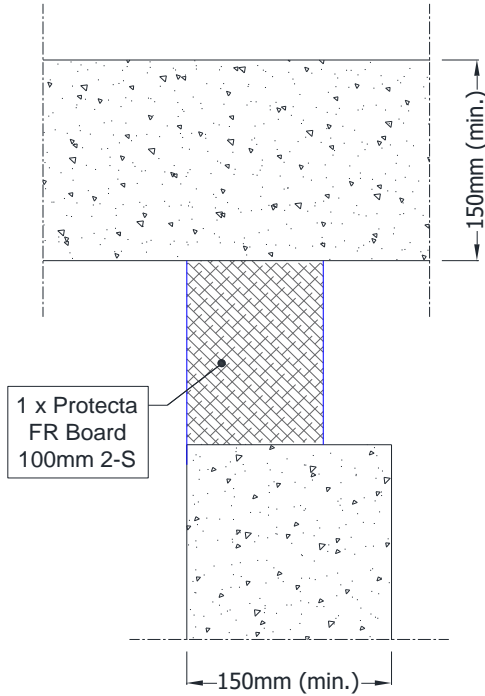
In relation to each of the above classifications, temperatures recorded on the seal (exclusive of the supporting construction) exceeded the maximum allowable after the following times (rounded down):

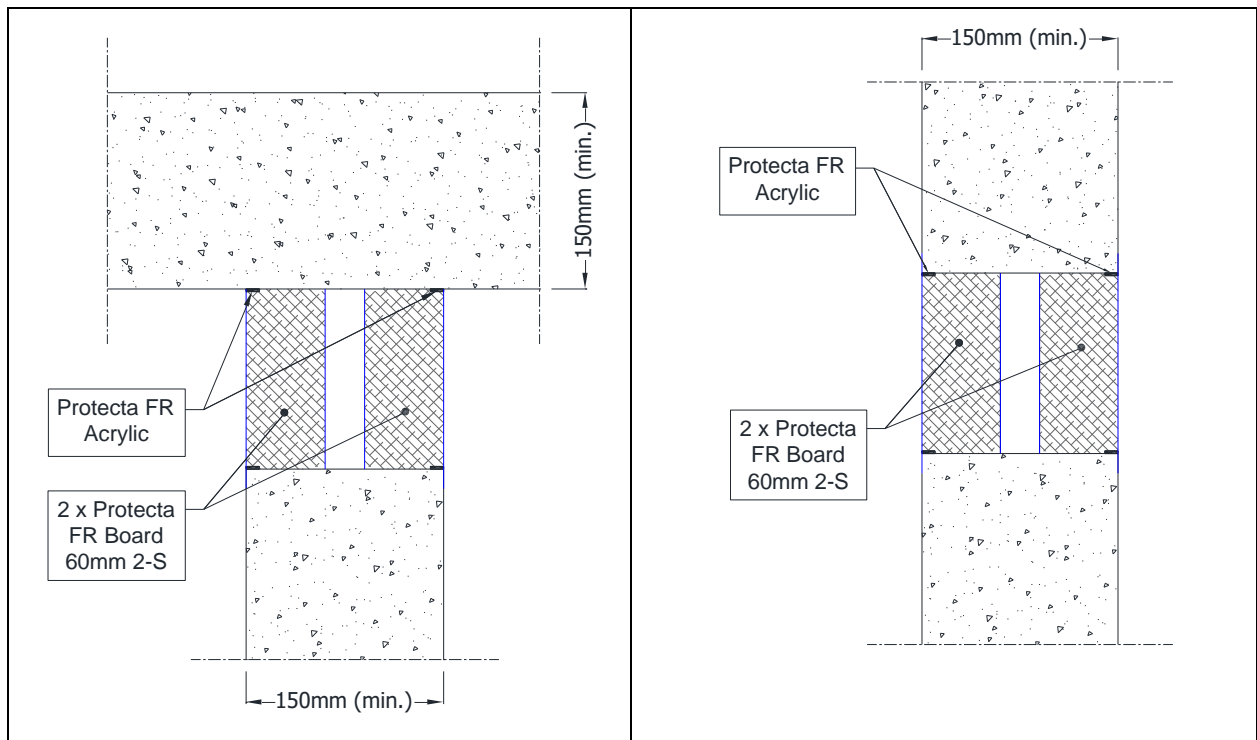
¹ 120

A.1.3 Linear joints in a vertical construction and horizontal wall joints abutting a floor, ceiling or roof

Joint Seal: Boards fitted to either face of the wall or at any position in between.

Construction details:





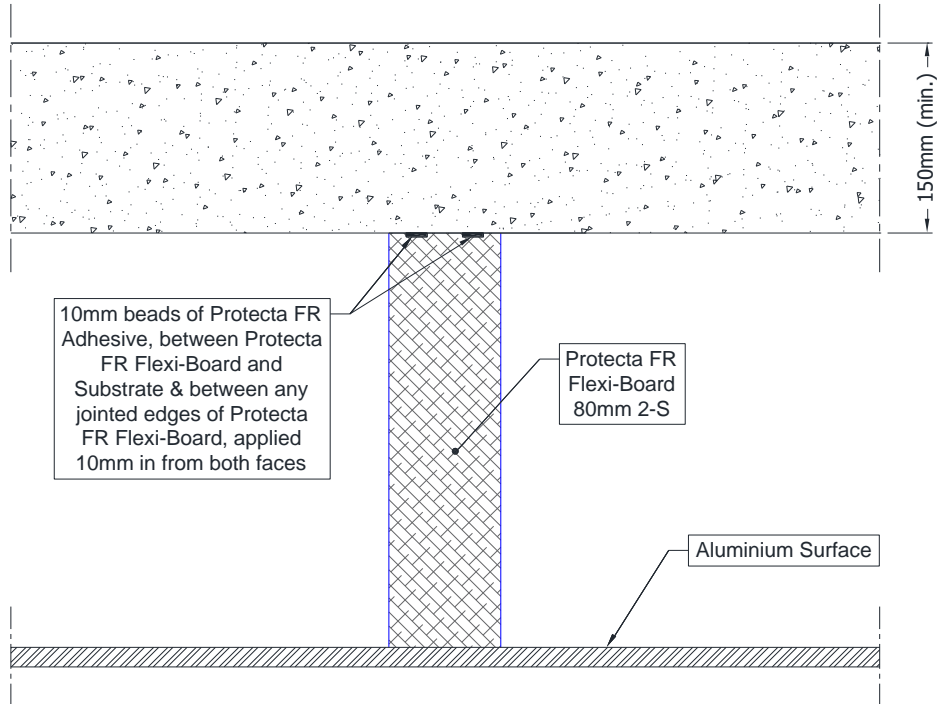
A.1.3.1

Substrate	Boards	Classification
masonry/ concrete	1 x 60 mm FR Board 2-S, edges and butt joints sealed with Protecta FR Acrylic	E 240 – T – X – F – W240 EI 90 – T – X – F – W240
	2 x 60 mm FR Board 2-S with minimum 30 mm air gap in-between, edges and butt joints sealed with Protecta FR Acrylic	E 240 – T – X – F – W240 EI 180 – T – X – F – W240
	1x 100 mm FR Board 2-S, friction fitted	E 240 – T – X – F – W120 EI 180 – T – X – F – W120
	1 x 100 mm FR Board 2-S, friction fitted	E 240 – V – X – F – W200 EI 120 – V – X – F – W200
masonry/ concrete/ timber	1 x 60 mm FR Board 2-S, edges and butt joints sealed with Protecta FR Acrylic	EI 60 – V – X – F – W600

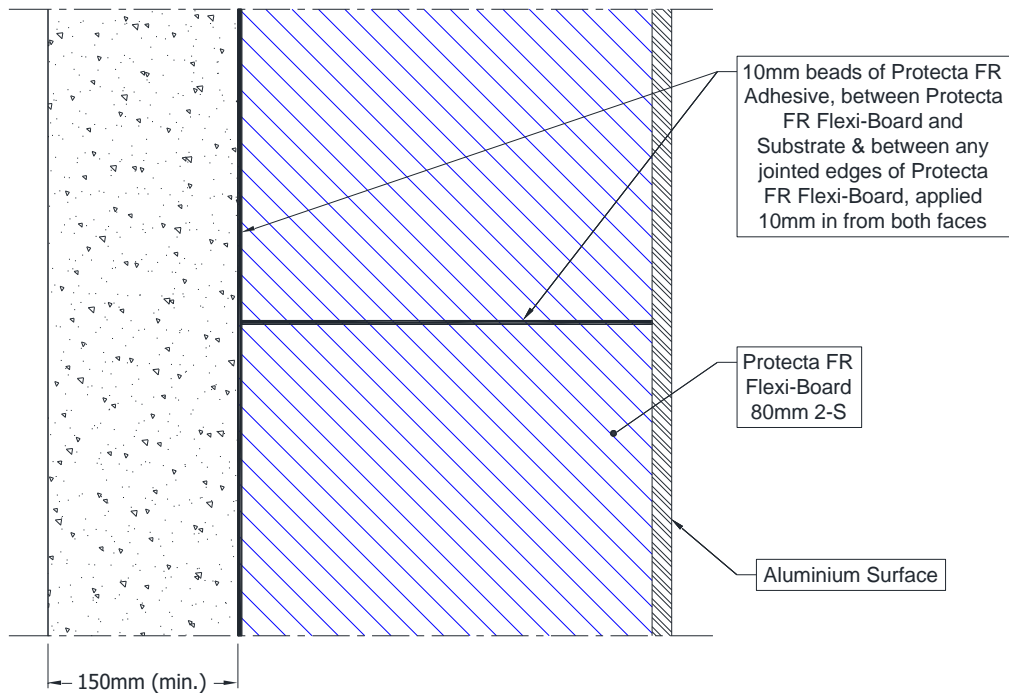
A.1.4 Vertical linear joints in a vertical construction

Joint Seal: Boards compression fitted to either face of the wall or at any position in between.

Construction details: Plan View



Construction details: Side View



A.1.4.1

Substrate	Boards	Classification *
masonry/ concrete/ aluminium	80 mm FR Flexi-Board 2-S, min. 80kg/m ³ , compressed into gap by 20mm. Bonded to one vertical side of the construction and in-between stone-wool with beads of Protecta FR Adhesive, leaving one vertical side not bonded but friction fitted	E 180 – V – X – F – W540 EI 30 – V – X – F – W540

*Additional and for information only.

The classifications provided in Table A.1.4.1 consider the insulation performance of all components within the firestopping system as per the requirements of EN 1366-4. This includes temperature evaluation of the metal substrates.

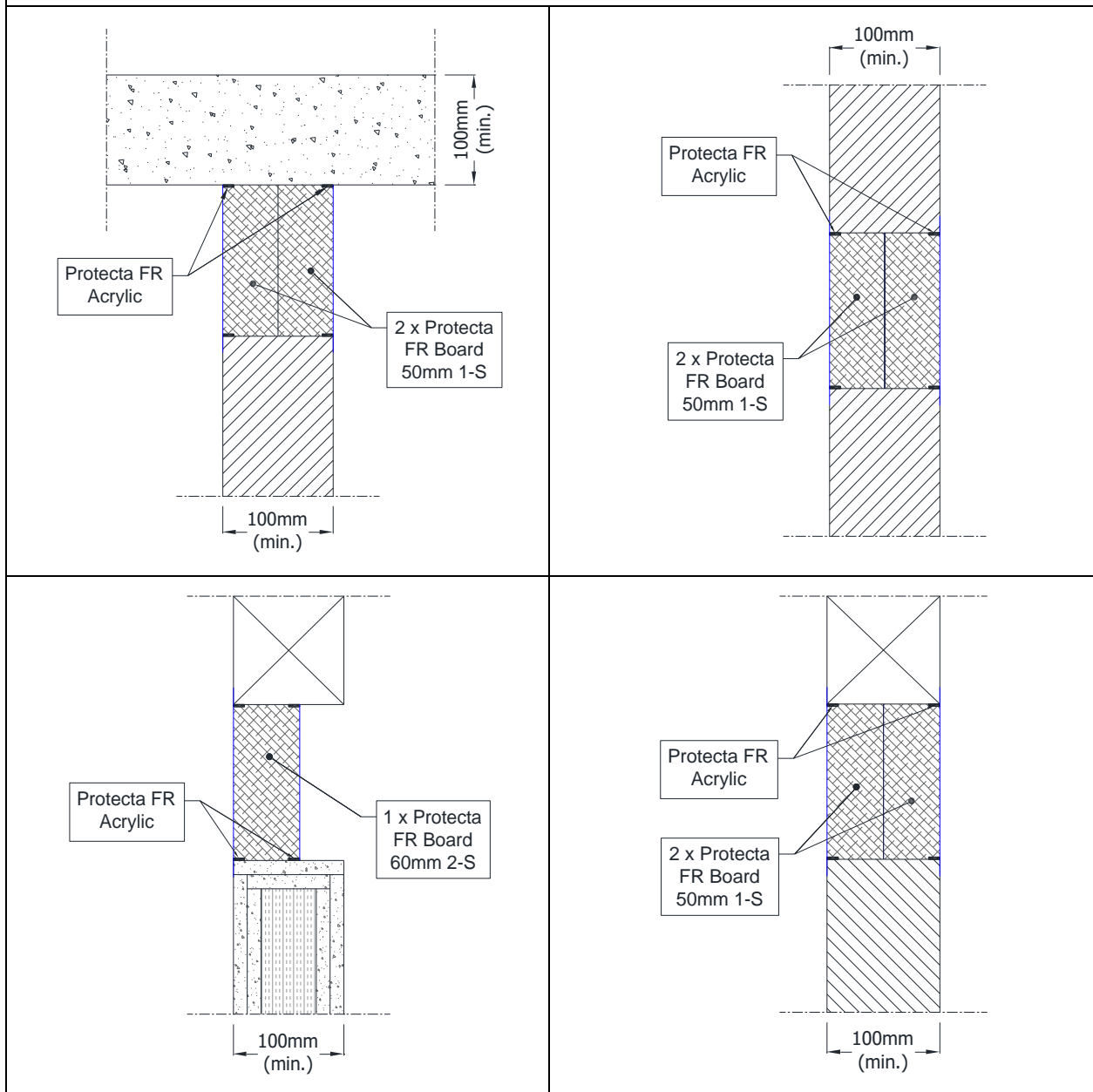
In relation to each of the above classifications, temperatures recorded on the seal (exclusive of the supporting construction) exceeded the maximum allowable after the following times (rounded down):

¹ 120

A.2 Flexible and rigid wall constructions with wall thickness of minimum 100 mm

A.2.1 Linear joints in a vertical construction and horizontal wall joints abutting a floor, ceiling or roof

Joint Seal: Single boards fitted to either face of the wall or at any position in between. Double boards fitted flush on both sides of the wall.



A.2.1.1

Substrate	Boards	Classification
flexible wall / rigid wall	2 x 50 mm FR Board 1-S, edges and butt joints sealed with Protecta FR Acrylic	EI 120 – T – X – F – W240
lined flexible wall / rigid wall / timber	1 x 60 mm FR Board 2-S, edges and butt joints sealed with Protecta FR Acrylic	EI 60 – V – X – F – W600

ANNEX B – Air Permeability – Protecta FR Board

Product tested	1200mm high x 600mm wide Protecta FR Board 50mm 2-S		
	Summary of testing procedure		Result
	Pressure (Pa)	Leakage (m ³ /h)	Leakage (m ³ /m ² /h)
Results under negative chamber pressure	25	0.00	0.00
	50	0.01	0.01
	100	0.02	0.03
	200	0.04	0.06
	300	0.11	0.15
	450	0.49	0.68
	600	0.95	1.32
Results under positive chamber pressure	25	0.00	0.00
	50	0.01	0.01
	100	0.03	0.04
	200	0.08	0.11
	300	0.2	0.28
	450	0.63	0.88
	600	1.01	1.40

