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Designated according to Article 29 of Regulation (EU) No 305/2011

Member of EOTA
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European Technical Assessment

ETA 21/0717
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General part

Technical Assessment Body issuing the ETA: ITeC ITeC has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment).	
Trade name of the construction product	**AF PANEL**
Product family to which the construction product belongs	Fire stopping and fire sealing products. Linear joint seals.
Manufacturer	**AF SYSTEMS SRL** Via Edward Jenner 41-43 IT-26837 Mulazzano Italy
Manufacturing plant(s)	According to Annex N kept by ITeC.
This European Technical Assessment contains	9 pages including 1 annex which forms an integral part of this assessment and Annex N, which contains confidential information and is not included in the European Technical Assessment when that assessment is publicly available.
This European Technical Assessment is issued in accordance with Regulation (EU) 305/2011, on the basis of	European Assessment Document EAD 350141-00-1106.

General comments

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es)).

Specific parts of the European Technical Assessment

1 Technical description of the product

AF PANEL is a rock wool panel coated on both faces with the acrylic ablative coating AF SEAL T1, with the characteristics given in the next table.

Table 1: Characteristics of AF PANEL.

Characteristic		Nominal value
Width		500 mm
Length		1000 mm
Thickness	Rock wool panel	50 mm
	AF SEAL T1 (each face)	1 mm
	AF PANEL	52 mm
Density	Rock wool panel	150 kg/m^3
	AF SEAL T1	1340 kg/m^3

The tolerance level of the rock wool panel thickness is class T3 according to EN 13162[1]. The rest of tolerances are established in the Control Plan.

AF PANEL is cut to size to fit the linear joint dimensions. The joint perimeter is sealed with the acrylic sealant AF SEAL W. The detailed description of the installation procedure is given in Annex A. Ancillary components cannot be CE marked based on this ETA.

2 Specification of the intended use(s) in accordance with the applicable EAD

AF PANEL is used to reinstate the resistance to fire performance between abutting constructive elements (walls and floors) or at linear discontinuities of a fire separating constructive element, designed not to accommodate movement (non-movement linear joints). The detailed specification of the linear joints sealed with AF PANEL is given in Annex A.

The specific constructive elements where AF PANEL may be used to provide a linear joint seal are as follows:

- Rigid walls: Concrete or masonry walls with a minimum thickness of 120 mm and a minimum density of 650 kg/m^3.
- Rigid floors: Concrete or other type of rigid floors with a minimum thickness of 200 mm and a minimum density of 2400 kg/m^3.

[1] EN 13162 Thermal insulation products for buildings - Factory made mineral wool (MW) products. Specification.

The constructive elements, where AF PANEL linear joint seal is installed, must be classified in accordance with EN 13501-2 [2] for the required fire resistance period.

AF PANEL is intended for the environmental conditions as defined for use category Type Y_1 according to EAD 350141-00-1106: intended for semi-exposed use at temperatures below 0°C, with exposure to UV but not to rain. Type Y_1 includes lower use categories (i.e. Type Y_2, Type Z_1 and Type Z_2).

The provisions made in this ETA are based on a working life of AF PANEL of at least 25 years, provided that the conditions laid down in the manufacturer's instructions for the installation, use and maintenance are met. These provisions are based upon the current state of the art and the available knowledge and experience.

The indications given as to the working life of the product cannot be interpreted as a guarantee but are regarded only as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

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

3.1 Performance of the product

The assessment of AF PANEL has been performed in accordance with EAD 350141-00-1106 for *Linear joint and gap fire seals (September 2017)*.

Table 2: Performance of the product.

Product: AF PANEL		**Intended use:** Linear joint fire seal
Basic requirement	**Essential characteristic**	**Performance**
BWR 2 Safety in case of fire	Reaction to fire	NPA[3]
	Resistance to fire	EI 180-V-X-B EI 180-H-X-B See Annex A
BWR 4 Safety and accessibility in use	Durability	Type Y_1

The rest of characteristics included in EAD 350141-00-1106 have not been assessed in this ETA.

[2] EN 13501-2 Fire classification of construction products and building elements. Part 2: Classification using data from fire resistance tests, excluding ventilation services.

[3] NPA: No Performance Assessed.

3.2 Methods used for the assessment

3.2.1 Fire resistance

The performance of AF PANEL has been tested and assessed according to EN 1366-4[4]. The classification of the resistance to fire has been determined according to EN 13501-2 and is given in Annex A.

3.2.2 Durability

AF PANEL has been tested and assessed for the environmental use category Type Y_1 in accordance with section 2.2.12 of EAD 350141-00-1106. AF SEAL T1 and AF SEAL W have been tested and assessed for the environmental use category Type Y_1 in accordance with EOTA Technical Report 024[5], section 2.2.4 (for a 25-year working life).

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

According to the Decision 1999/454/EC of the European Commission, the system of AVCP (see EC delegated Regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) given in the following table applies.

Table 3: AVCP System.

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

[4] EN 1366-4 Fire resistance tests for service installations. Part 4: Linear joint seals (2006+A1:2010).

[5] EOTA TR 024 Technical description and assessment of reactive products effective in case of fire, Edition August 2019.

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

All the necessary technical details for the implementation of the AVCP system are laid down in the *Control Plan* deposited with the ITeC and agreed in accordance with EAD 350141-00-1106, section 3.

The *Control Plan* is a confidential part of the ETA and only handed over to the notified product certification body involved in the assessment and verification of constancy of performance.

The factory production control operated by the manufacturer shall be in accordance with the above mentioned *Control Plan*.

Issued in Barcelona on 23 December 2021

by the Catalonia Institute of Construction Technology.

Institut de Tecnologia de la Construcció de Catalunya

Ferran Bermejo Nualart
Technical Director, ITeC

ANNEX A. Resistance to fire performance

A.1. Resistance to fire classification

Table A.1: Resistance to fire classification.

Constructive element (according to section 2)	Linear joint seal description	Resistance to fire
Rigid walls	Section A.2.2.1	EI 180-V-X-B
	Section A.2.2.2	EI 120-V-X-B
Rigid floors	Section A.2.3.1	EI 180-H-X-B
	Section A.2.3.2	EI 120-H-X-B / E 180-H-X-B

A.2. Description of the linear joint seal

A.2.1. General

AF PANEL will be installed in accordance with the manufacturer instructions and the provisions in this annex.

AF PANEL is cut to size along the panel length and inserted into the linear joint, tightly fitted by compression. AF PANEL can be used to seal linear joints with a width from 100 mm to 200 mm. The initial degree of compression shall be approximately 2 % across the original panel width (see figure 4 in EAD 350141-00-1106).

The perimeter junction between AF PANEL and the constructive element, as well as splices along AF PANEL seal, shall be sealed with acrylic sealant AF SEAL W at both sides of the seal.

The installation of the linear joint seal will not have an effect on the stability of the adjacent building element, even in the event of fire.

The structural elements related to the wall/floor in which the linear joint seal is incorporated will be designed and fire protected in such a way that no additional mechanical load is imposed on the linear joint seal.

A.2.2. Vertical linear joint seal in walls

A.2.2.1. Double layer of AF PANEL vertical linear joint seal in walls

A double layer of AF PANEL is installed to provide the sealing of a vertical linear joint. Every AF PANEL layer is installed levelled to the wall surface at both sides of the constructive element, generating an air cavity of minimum 16 mm (for a wall of 120 mm thickness) between the two layers of AF PANEL. Details of the joint seal are shown in the next figure.

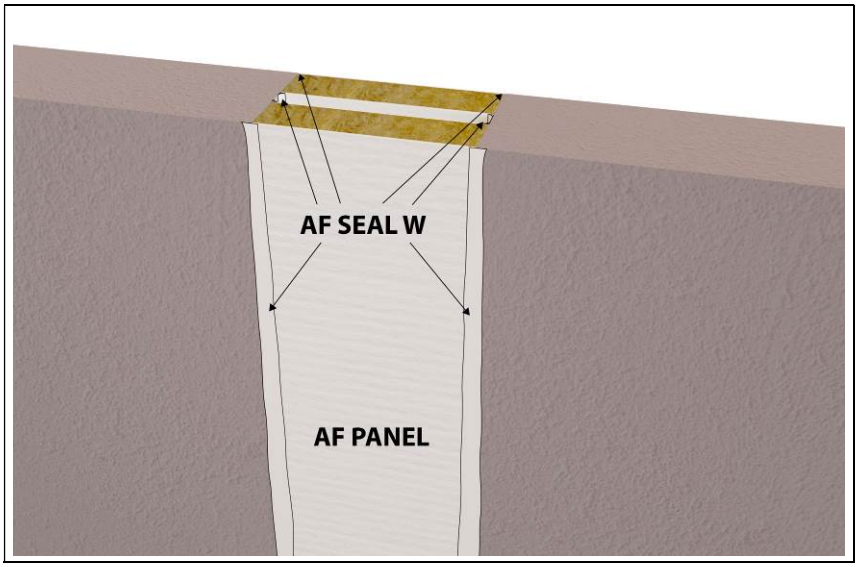

Figure A.1: Vertical double layer linear joint seal in walls.

A.2.2.2. Single layer of AF PANEL vertical linear joint seal in walls

A single layer of AF PANEL is installed to provide the sealing of a vertical linear joint. AF PANEL layer is installed centred in the joint depth (wall thickness). Details of the joint seal are shown in the next figure.

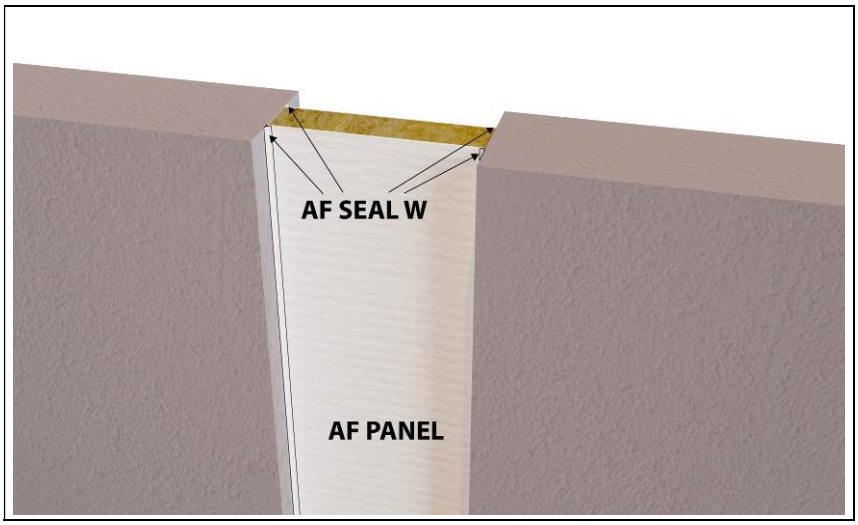

Figure A.2: Vertical single layer linear joint seal in walls.

A.2.3. Horizontal linear joint seal in floors

A.2.3.1. Double layer of AF PANEL horizontal linear joint seal in floors

A double layer of AF PANEL is installed to provide the sealing of a horizontal linear joint. AF PANEL layers are installed adjacent to each other, with the lower layer at 20 mm deep from the bottom surface of the floor. Details of the joint seal are shown in the next figure.

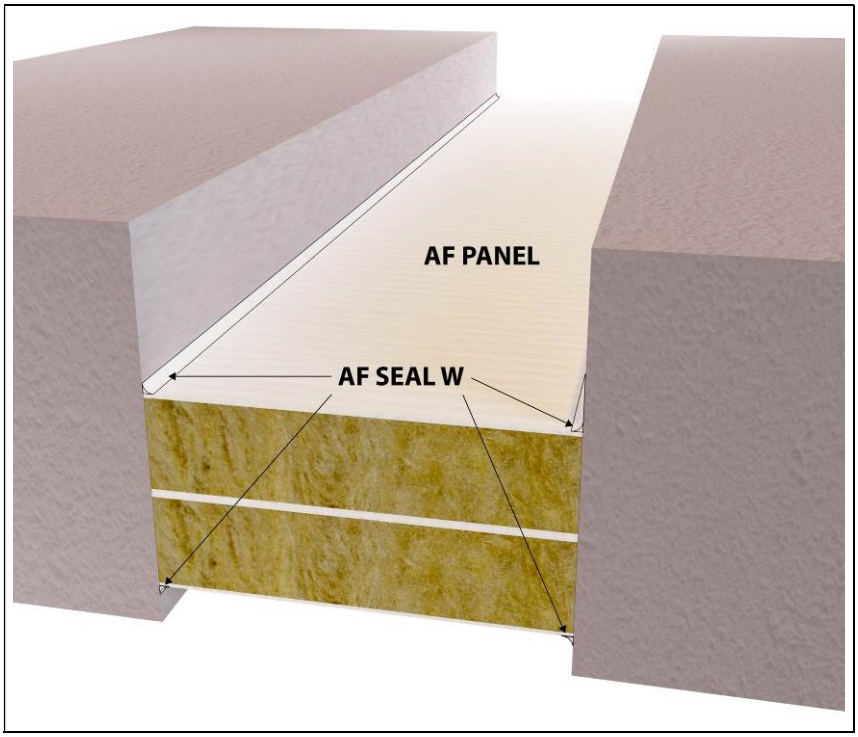

Figure A.3: Horizontal double layer linear joint seal in floors.

A.2.2.2. Single layer of AF PANEL horizontal linear joint seal in floors

A single layer of AF PANEL is installed to provide the sealing of a horizontal linear joint, at 20 mm deep from the bottom surface of the floor. Details of the joint seal are shown in the next figure

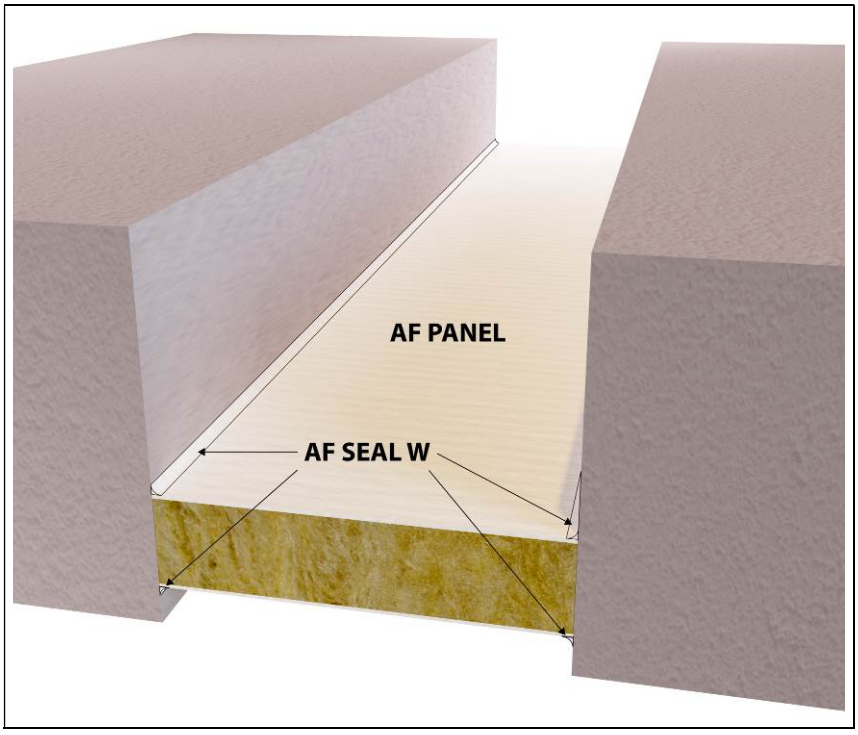

Figure A.4: Horizontal single layer linear joint seal in floors.