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

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European Technical Assessment

ETA-18/0105 of 15.05.2018

General part

Technical Assessment Body issuing the European Technical Assessment	Österreichisches Institut für Bautechnik (OIB) Austrian Institute of Construction Engineering
Trade name of the construction product	System FIRESTOP-S
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Products: Penetration Seals
Manufacturer	SIA Knauf Daugavas iela 4 2118 Saurieši, Stopiņu novads LATVIA
Manufacturing plant	KNAUF Plant B
This European Technical Assessment contains	16 pages including Annexes A-1 to D-1 which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	European Assessment Document EAD 350454-00-1104 „Fire stopping and fire sealing products – Penetration seals"

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Specific parts

1 Technical description of the product

"System FIRESTOP-S" is a product to be used as cable penetration seal based on the intumescent fire protection sealant "FPS – fire protection silicone".

Component of "System FIRESTOP-S"	Characteristics
FPS – fire protection silicone	Product in cartridges on the basis of silicone with intumescent fire protection additives

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

2.1 Intended use

"System FIRESTOP-S" is intended to be used as a cable penetration seal to temporarily or permanently reinstate the fire resistance performance of flexible wall constructions, rigid wall constructions and rigid floor constructions where they have been provided with apertures which are penetrated by various cables.

The thickness of the penetration seal has to be minimum 150 mm consisting of one layer of at least 15 mm "FPS – fire protection silicone" on both sides of the separating element.

The maximum opening size of the penetration seal has to comply with the dimensions as specified in the following table.

Blank penetration seals with maximum opening sizes as specified in the following table have been tested.

"System FIRESTOP-S" can be installed only in the types of separating elements as specified in the following table.

Separating element	Construction	a) Maximum opening size of the penetration seal (width x height) b) Minimum thickness of the penetration seal
Flexible walls	> Steel studs or timber studs lined on both faces with minimum 2 layer of boards (minimum thickness 12,5 mm) with classification A2-s1,d0 or A1 according to EN 13501-1 > For timber stud walls there shall be a minimum distance of 100 mm of the penetration seal to any timber stud. The cavity between the penetration seal and the timber stud has to be closed with minimum 100 mm of insulation with classification A1 or A2 according to EN 13501-1 > Minimum thickness 94 mm > Classification according to EN 13501-2: ≥ EI 60 > This European Technical Assessment does not cover sandwich panel constructions and flexible walls were the lining does not cover studs on both sides. Penetrations in such constructions shall be tested on a case by case basis	See Annex B-1 of the ETA): a) 100 x 100 [mm] / Ø 113 mm b) 150 mm
Rigid walls	> Aerated concrete, concrete, reinforced concrete, masonry > Minimum density 450 kg/m³ > Minimum thickness 100 mm > The rigid wall shall be classified in accordance with EN 13501-2 for the required fire resistance period	See Annex B-2 and B-3 of the ETA): a) 100 x 100 [mm] / Ø 113 mm b) 150 mm
Rigid floors	> Aerated concrete, concrete, reinforced concrete > Minimum density 450 kg/m³ > Minimum thickness 150 mm > The rigid floor shall be classified in accordance with EN 13501-2 for the required fire resistance period	See Annex C-1 of the ETA): a) 100 x 100 [mm] / Ø 113 mm b) 150 mm

"System FIRESTOP-S" can only be configured as specified in the following tables. Other parts or service support constructions shall not penetrate the penetration seal.

Penetrating element	Construction characteristics of the penetrating element in "System FIRESTOP-S" in flexible walls, rigid walls and rigid floors
Cables	> All types of sheathed cables[1] (except waveguides) currently and commonly used in building practice in Europe (e.g. electrical / telecommunication / data / optical fibre cables) with a diameter ≤ 21 mm

[1] Single or multicore cable with individual insulation of the cores and an additional protective covering of the assembly

2.2 Use condition

"System FIRESTOP-S" is intended for use in conditions exposed to weathering, and can therefore – according to EAD 350454-00-1104 clause 2.2.9.3.1 – be categorized as Type X. Since the requirements for Type X are met, also the requirements for TypeY_1, Y_2, Z_1 and Z_2 are fulfilled.

Although a penetration seal is intended for indoor applications only, the construction process may result in it being subjected to more exposed conditions for a period before the building envelope is closed. For this case provisions shall be made to protect temporarily exposed penetration seals according to the ETA-holder's installation instructions.

2.3 Working life

The provisions made in this European Technical Assessment are based on an assumed working life of "System FIRESTOP-S" of 10 years, provided the conditions laid down in the technical literature of the manufacturer relating to packaging, transport, storage, installation, use and repair are met.

The indications given on the intended 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 selecting the appropriate product in relation to the expected economically reasonable working life of the works.

The real working life might be, in normal use conditions, considerably longer without major degradation affecting the Basic requirements for construction works.

2.4 General assumptions

2.4.1 It is assumed that

- damages to the penetration seal are repaired accordingly,
- the installation of the penetration seal does not effect the stability of the adjacent building element – even in case of fire,
- the lintel or floor above the penetration seal is designed structurally and in terms of fire protection such that no additional mechanical load (other than its own weight) is imposed on the penetration seal,
- the installations are fixed to the adjacent building element (not to the penetration seal) in accordance with the relevant regulations in such a way that, in case of fire, no additional mechanical load is imposed to the penetration seal,
- the support of the installations is maintained for the required period of fire resistance.

2.5 Manufacturing

The European Technical Assessment is issued for the product on the basis of agreed data / information, deposited with the Österreichisches Institut für Bautechnik, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data / information being incorrect, should be notified to the Österreichisches Institut für Bautechnik before the changes are introduced.

The Österreichisches Institut für Bautechnik will decide whether or not such changes affect the European Technical Assessment and consequently the validity of the CE marking on the basis of the European Technical Assessment and if so whether further assessment or alterations to the European Technical Assessment, shall be necessary.

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

Basic requirements for construction works	Essential characteristic	Method of verification	Performance
BWR 2	Reaction to fire	EN 13501-1: 2007+A1:2009	Clause 3.1.1 of the ETA
	Resistance to fire	EN 13501-2: 2007+A1:2009	Clause 3.1.2 of the ETA and Annex D-1 of the ETA
BWR 3	Air permeability	No performance assessed	
	Water permeability	No performance assessed	
	Content, emission and/or release of dangerous substances	No performance assessed	
BWR 4	Mechanical resistance and stability	No performance assessed	
	Resistance to impact / movement	No performance assessed	
	Adhesion	No performance assessed	
	Durability	EAD 350454-00-1104 clause 2.2.9	Clause 3.3.4 of the ETA
BWR 5	Airborne sound insulation	No performance assessed	
BWR 6	Thermal properties	No performance assessed	
	Water vapour permeability	No performance assessed	

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

The components of "System FIRESTOP-S" were assessed according to EAD 350454-00-1104 clause 2.2.1 and classified according to EN 13501-1:2007+A1:2009.

Component	Class according to EN 13501-1:2007+A1:2009
FPS – fire protection silicone	**E**

3.1.2 Resistance to fire

"System FIRESTOP-S" was tested according to EAD 350454-00-1104 clause 2.2.2 and EN 1366-3:2009 in conjunction with EN 1363-1:1999.

Based upon the gained test results and the field of application specified within EN 1366-3:2009 "System FIRESTOP-S" has been classified according to EN 13501-2:2007+A1:2009. The individual fire resistance classes are listed in Annex D-1 of the ETA.

The resistance to fire classification listed in Annex D-1 of the ETA is only valid if "System FIRESTOP-S" is installed according to Annex A-1 to A-3 of the ETA.

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3.2 Hygiene, health and the environment (BWR 3)

3.2.1 Air permeability

No performance assessed.

3.2.2 Water permeability

No performance assessed.

3.2.3 Content, emission and/or release of dangerous substances

No performance assessed.

3.3 Safety and accessibility in use (BWR 4)

3.3.1 Mechanical resistance and stability

No performance assessed.

3.3.2 Resistance to impact / movement

No performance assessed.

3.3.3 Adhesion

No performance assessed.

3.3.4 Durability

All components of "System FIRESTOP-S" fulfil the requirements for the intended use condition.

"System FIRESTOP-S" is therefore appropriate for use in conditions exposed to weathering, and can – according to EAD 350454-00-1104 clause 2.2.9.3.1 – be categorized as Type X. Since the requirements for Type X are met, also the requirements for TypeY_1, Y_2, Z_1 and Z_2 are fulfilled.

3.4 Protection against noise (BWR 5)

3.4.1 Airborne sound insulation

No performance assessed.

3.5 Energy economy and heat retention (BWR 6)

3.5.1 Thermal properties

No performance assessed.

3.5.2 Water vapour permeability

No performance assessed.

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

4.1 AVCP system

According to the Decision 1999/454/EC[2], amended by Decision 2001/596/EC[3] of the European Commission the system of assessment and verification of constancy of performance (see Annex V of Regulation (EU) No 305/2011) is given in the following table.

Product(s)	Intended use(s)	Level(s) or class(es) (resistance to fire)	System of assessment and verification of constancy of performance
Fire Stopping and Fire Sealing Products	for fire compartmentation and/or fire protection or fire performance	any	1

In addition, according to the Decision 1999/454/EC, amended by Decision 2001/596/EC of the European Commission the system(s) of assessment and verification of constancy of performance, with regard to reaction to fire, is given in the following table.

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	System of assessment and verification of constancy of performance
Fire Stopping and Fire Sealing Products	for uses subject to regulations on reaction to fire	A1*, A2*, B*, C*	1
		A1**, A2**, B**, C**, D, E	3
		(A1 to E)***, F	4

* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)

** Products/materials not covered by footnote (*)

*** Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of class A1 according to Commission Decision 96/603/EC, as amended)

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the Technical Assessment Body Österreichisches Institut für Bautechnik.

The notified product certification body shall visit the factory at least twice a year for surveillance of the manufacturer.

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Rainer Mikulits
Managing Director

[2] Official Journal of the European Communities no. L 178, 14.7.1999, p. 52
[3] Official Journal of the European Communities no. L 209, 2.8.2001, p. 33