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European Technical Assessment

ETA-20/1114 of 29/12/2020

General Part

Technical Assessment Body issuing the European Technical Assessment	Instytut Techniki Budowlanej
Trade name of the construction product	Sikasil®-670 Fire
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Products. Linear Joint and Gap Seals
Manufacturer	Sika Services AG Tuffenwies 16-22 CH-8064 Zürich Switzerland
Manufacturing plant	Manufacturing plant No. 1213
This European Technical Assessment contains	15 pages including 1 Annex 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 350141-00-1106 “Fire Stopping and Fire Sealing Products. Linear Joint and Gap Seals”

This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Specific Part

1 Technical description of the product

Sikasil®-670 Fire is silicone-based sealant used to form linear gap seals where gaps are present in wall and floor constructions and linear joint seals where they abut each other.

Sikasil®-670 Fire is supplied in liquid form contained within 300 ml cartridges or 600 ml foils. The sealant is gunned or trowelled into the aperture in or between the separating element / elements to a specified depth utilising backing materials.

Polyethylen Backing Rod, reference SIKA PE (reaction to fire class F) is utilised a depth gauge.

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

2.1 Intended use

The intended use of Sikasil®-670 Fire is to reinstate the fire resistance performance of rigid wall and floor constructions where there are linear joints and gaps.

The specific elements of construction, that Sikasil®-670 Fire may be used to provide a linear joint or gap seal in are as follows:

Rigid walls: The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete (AAC) or masonry, with a minimum density of 650 kg/m^3.

Rigid floors: The floor must have a minimum thickness of 150 mm and comprise concrete, aerated concrete (AAC) or masonry, with a minimum density of 650 kg/m^3.

Types of the seals are specified in Annex A.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period (equal or greater than specified in Annex A).

The Sikasil®-670 Fire may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex A).

The maximum permitted joint / gap width is 50 mm.

The Sikasil®-670 Fire shall be used to form linear joint or gap seals with maximum movement capability of 25%.

The provisions made in this European Technical Assessment are based on an assumed working life of the Sikasil®-670 Fire of 25 years. 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.

Additional provisions are given in Annex A1.

2.2 Use category

Type X: intended for use in conditions exposed to weathering.

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

3.1 Performance of the product

3.1.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class E
Resistance to fire	Annex A

3.1.2 Hygiene, health and the environment (BWR 3)

No performance assessed.

3.1.3 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Mechanical resistance and stability	No performance assessed
Resistance to impact / movement	No performance assessed
Adhesion	No performance assessed
Durability	Use category: Type X
Movement capability	Movement capability ≤ 25%

3.1.4 Protection against noise (BWR 5)

No performance assessed.

3.1.5 Energy economy and heat retention (BWR 6)

No performance assessed.

3.2 Methods used for the assessment

The assessment of the products has been made in accordance with EAD 350141-00-1106 "Fire Stopping and Fire Sealing Products. Linear Joint and Gap Seals".

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

According to Decision 99/454/EC of the European Commission, as amended by Decision 2001/596/EC of the European Commission the system 1 of assessment and verification of constancy of performance applies (see Annex V to regulation (EU) No 305/2011).

5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 29/12/2020 by Instytut Techniki Budowlanej

Anna Panek, MSc
Deputy Director of ITB

Additional provisions

- Sikasil®-670 Fire shall be applicable only to straight parallel edge surfaces of linear joints or gaps.
- Possible orientation of the linear joint seals is presented in fig. A1 and Table A1.

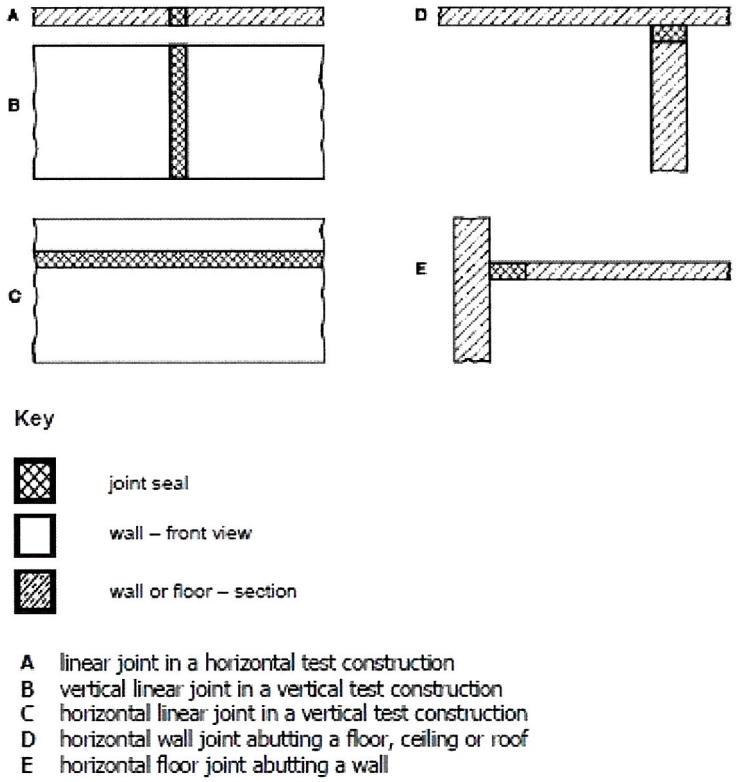


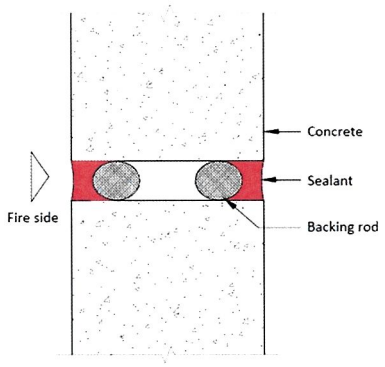
Fig. A1. Possible orientation of linear joint seals

Table A1

Seal type tested orientation	Possible orientation in accordance with fig. A1
A	A, D, E [a]
B	B
C	C, D [b]

[a] Orientation E will only be covered by test orientation A if shear movement was chosen and one face of the joint was fixed and the other was moved.
[b] Orientation D will only be covered by test orientation C if shear movement was chosen and one face of the joint was fixed and the other was moved.

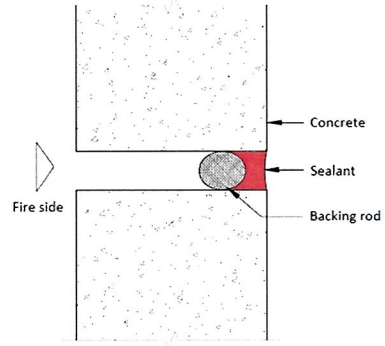
Fig. A2. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Double Seal).



Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A2 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - AAC	**EI 240 – V – 25 – F – W 12-50**
		EI 240 – V – X – F – W 12-50

Fig. A3. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Single Seal).

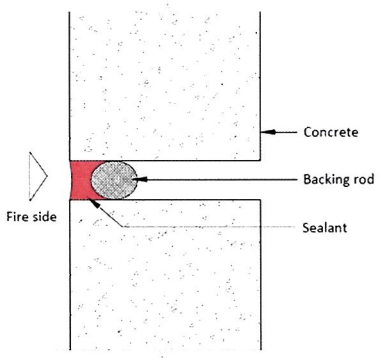


Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A3 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
15	AAC - AAC	**EI 45 E 180 – V – 25 – F – W 0-30**
width x 0.5		**EI 30 E 240 – V – 25 – F – W 12-50**
		EI 60 E 240 – V – X – F – W 12-50

Sikasil®-670 Fire	**Annex A2** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

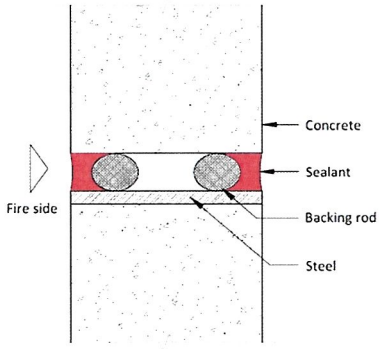
Fig. A4. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Single Seal).



Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A4 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
15	AAC - AAC	**EI 45 E 60 – V – 25 – F – W 10-30**
width x 0.5		**EI 45 E 60 – V – 25 – F – W 30-50**
15		**EI 60 E 240 – V – X – F – W 10-30**
width x 0.5		**EI 45 E 180 – V – X – F – W 30-50**

Fig. A5. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Double Seal).

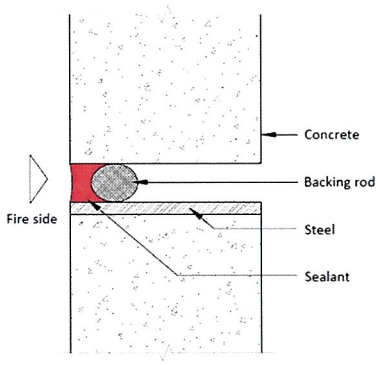


Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A5 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - Steel	**EI 60 E 240 – V – X – F – W 12-30**
		EI 90 E 240 – V – X – F – W 30-50

Sikasil®-670 Fire	**Annex A3** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

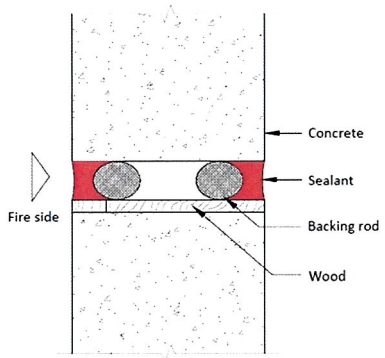
Fig. A6. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Single Seal).



Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A6 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - Steel	**EI 15 E 240 – V – X – F – W 12-50**

Fig. A7. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Double Seal).

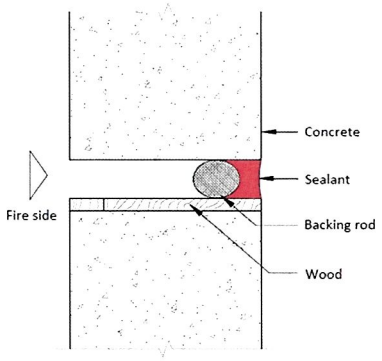


Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A7 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - Softwood	**EI 120 – V – X – F – W 12-50**

Sikasil®-670 Fire	**Annex A4** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

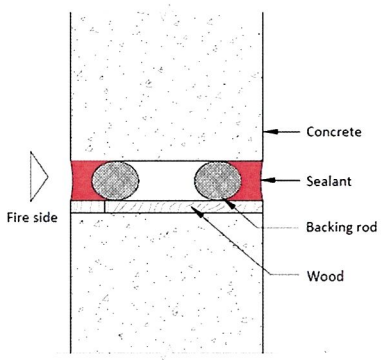
Fig. A8. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Single Seal).



Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A8 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - Softwood	**EI 90 – V – X – F – W 12-50**

Fig. A9. Vertical linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Double Seal).

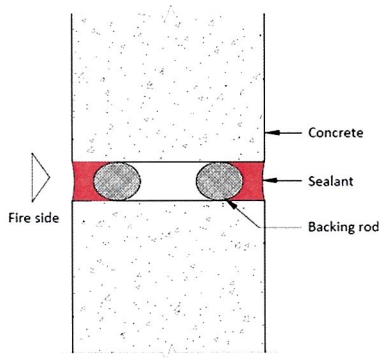


Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A9 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - Hardwood	**EI 180 – V – X – F – W 12-30**
		EI 240 – V – X – F – W 30-50

Sikasil®-670 Fire	**Annex A5** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

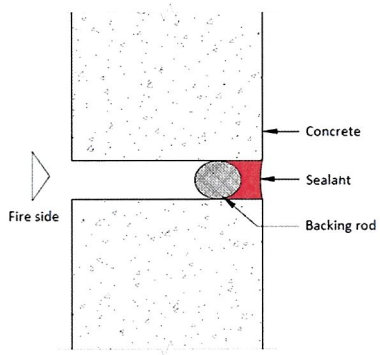
Fig. A10. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Double Seal).



Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A10 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - AAC	**EI 180 E 240 – T – 25 – F – W 12-50**
		EI 240 – T – X – F – W 12-50

Fig. A11. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Single Seal).

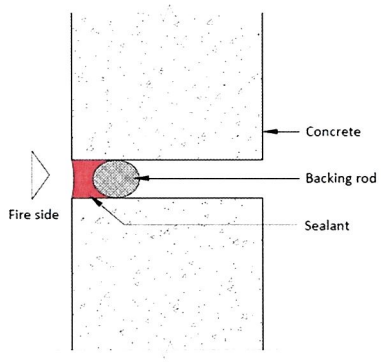


Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A11 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.5	AAC - AAC	**EI 60 E 120 – T – 25 – F – W 12-50**
		EI 60 E 240 – T – X – F – W 12-50

Sikasil®-670 Fire	**Annex A6** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

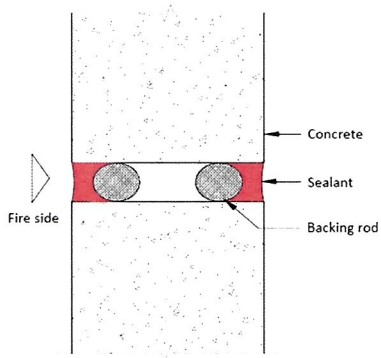
Fig. A12. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid wall thickness of ≥ 150 mm (Single Seal).



Resistance to fire classification of linear joint seal in rigid wall, in accordance with fig. A12 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
15	AAC - AAC	**EI 45 E 60 – T – 25 – F – W 10-30**
width x 0.5		**EI 45 E 60 – T – 25 – F – W 30-50**
15		**EI 60 E 180 – T – X – F – W 10-30**
width x 0.5		**EI 60 E 90 – T – X – F – W 30-50**

Fig. A13. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid floor thickness of ≥ 150 mm (Double Seal).

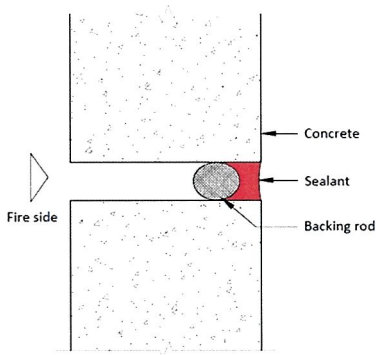


Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A13 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.8	AAC - AAC	**EI 180 E 240 – H – 25 – F – W 12-50**
		EI 240 – H – X – F – W 12-50

Sikasil®-670 Fire	**Annex A7** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

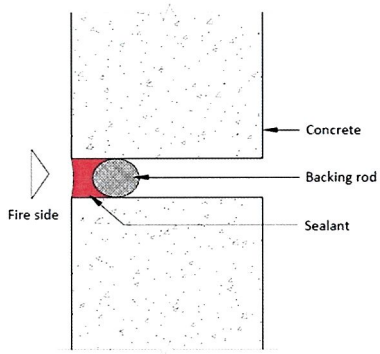
Fig. A14. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid floor thickness of ≥ 150 mm (Single Seal).



Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A14 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.8	AAC - AAC	**EI 60 E 240 – H – 25 – F – W 12-50**
width x 0.5		**EI 120 E 240 – H – X – F – W 12-30**
		EI 60 E 240– H – X – F – W 30-50

Fig. A15. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid floor thickness of ≥ 150 mm (Single Seal).

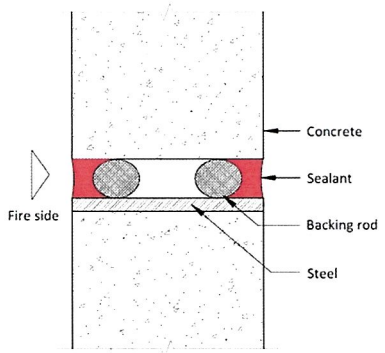


Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A15 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.8	AAC - AAC	**EI 60 E 90 – H – 25 – F – W 12-50**
		EI 60 E 60 – H – X – F – W 30-50

Sikasil®-670 Fire	**Annex A8** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

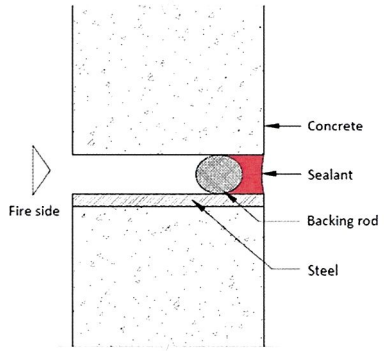
Fig. A16. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid floor thickness of ≥ 150 mm (Double Seal).



Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A16 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.8	AAC - Steel	**EI 60 E 240 – H – X – F – W 12-50**

Fig. A17. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid floor thickness of ≥ 150 mm (Single Seal).

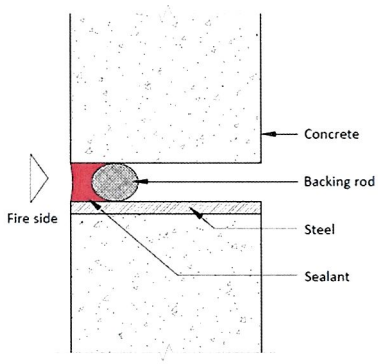


Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A17 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.8	AAC - Steel	**EI 60 E 90 – H – X – F – W 12-50**

Sikasil®-670 Fire	**Annex A9** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	

Fig. A18. Horizontal linear joint seal of Sikasil®-670 Fire with PE Backing Rod in rigid floor thickness of ≥ 150 mm (Single Seal).



Resistance to fire classification of linear joint seal in rigid floor, in accordance with fig. A18 and Annex A1:

Sikasil®-670 Fire depth, mm	Substrates	Fire resistance class
width x 0.8	AAC - Steel	**EI 60 E 90 – H – X – F – W 12-50**

Sikasil®-670 Fire	**Annex A10** of European Technical Assessment ETA-20/1114
Installation details and resistance to fire classification of linear joint seals	