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Member of



European Technical Assessment

ETA-20/0330
of 26/05/2020

General Part

Technical Assessment Body issuing the European Technical Assessment

Instytut Techniki Budowlanej

Trade name of the construction product

INTU FR EJ SEAL

Product family to which the construction product belongs

Fire Stopping and Fire Sealing Products.
Linear Joint and Gap Seals

Manufacturer

INTUSEAL Sp. z o.o.
ul. Kineskopowa 1
05-500 Piaseczno, Poland

Manufacturing plant

INTUSEAL Sp. z o.o.
ul. Kineskopowa 1
05-500 Piaseczno, Poland

This European Technical Assessment contains

20 pages including 3 Annexes 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"

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Specific Part

1 Technical description of the product

INTU FR EJ SEAL is a compressible strip, consisting of layers of melamine foam and intumescent laminate. Range of the product and dimensions are presented in Annex B.

INTU FR EJ SEAL product is supplied as a single piece. It is compressed and pushed by hand into the linear joint or gap, on the mineral wool used as a backing material.

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

2.1 Intended use

The intended use of the INTU FR EJ SEAL product 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 the INTU FR EJ SEAL may be used to provide a linear joint or gap seal in, are, depending on the type of the seal, as follows:

Type 1 to 4 and 12 – rigid walls: The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete, bricks or blocks, with a minimum density of 600 kg/m³.

Type 5 to 11 – rigid walls abutting floors: The wall must have a minimum thickness of 150 mm and comprise construction elements made of aerated or reinforced concrete with a minimum density of 600 kg/m³.

Type 5 to 11 – rigid floors: The floor must have a minimum thickness of 150 mm and comprise construction elements made of aerated or reinforced concrete with a minimum density of 1700 kg/m³.

Types of the seals are specified in Annex C.

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 C).

The INTU FR EJ SEAL may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (see Annex C).

The permitted joint / gap width is specified in Annex C.

The INTU FR EJ SEAL is intended to be used to form linear joint or gap seals with movement capability lower than 7,5% (non-movement joints).

The performances given in this European Technical Assessment are based on an assumed working life of the INTU FR EJ SEAL of 10 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 A.

2.2 Use category

Type Z₂: intended for use in internal conditions with humidity lower than 85% RH, excluding temperatures below 0°C, without exposure to rain or UV.

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	No performance assessed
Resistance to fire	Annex C

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	Covered by tests carried out for the assessment of movement capability
Durability	Use category: Type Z ₂
Movement capability	Movement capability ≤ 7,5% (non-movement joints)
Compression set	Seal remains in position

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 product 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

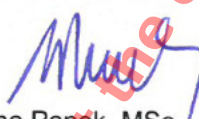
According to Decision 99/454/EC of the European Commission, as amended by Decision 2001/596/EC of the European Commission the system 1 of assessment and verification of constancy of performance applies (see Annex V to Regulation (EU) No 305/2011).

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.

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Anna Panek, MSc
Deputy Director of ITB

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

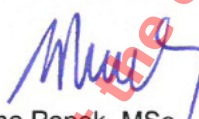
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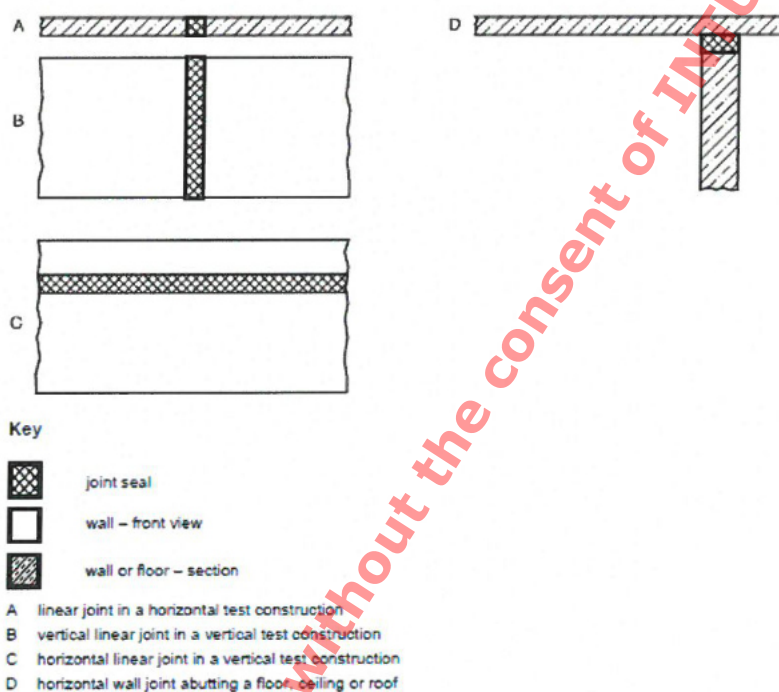
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Additional provisions

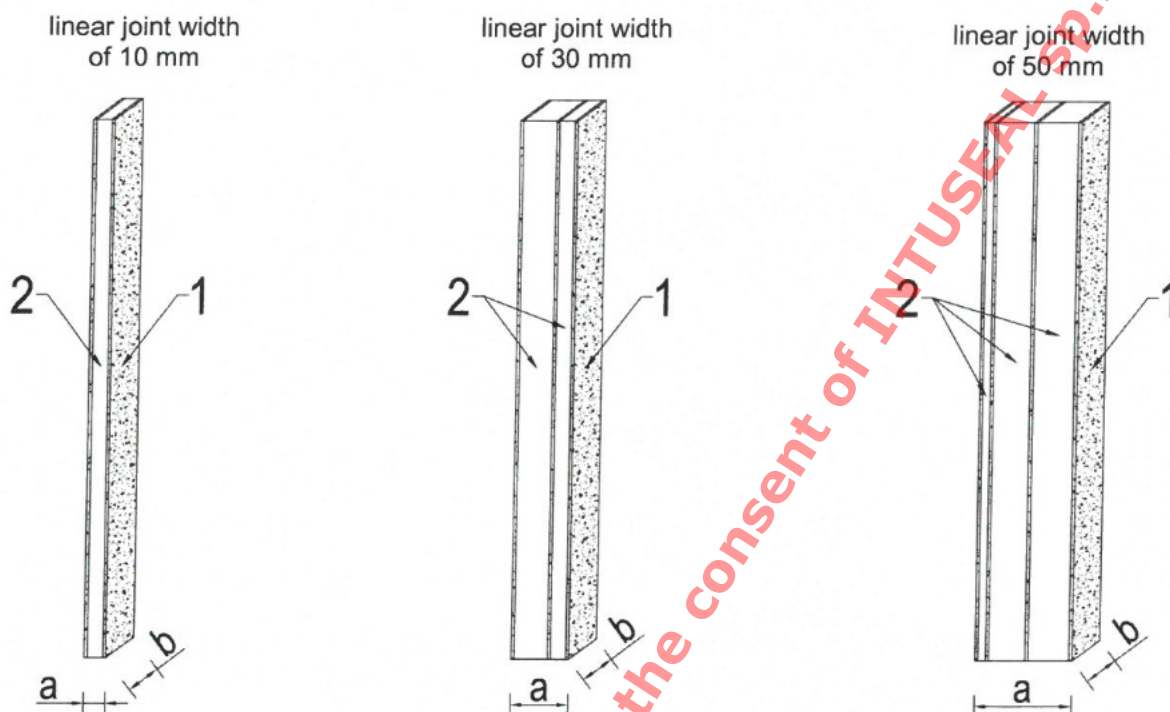
- The INTU FR EJ SEAL product shall be applicable only to straight parallel edge surfaces of linear joints or gaps.
- Non-combustible rock mineral wool shall be used with a density of not less than 50 kg/m³, or mineral wool with a lower density, compressed to a density of not less than 50 kg/m³.
- The minimum sealing depth in linear joint seals with INTU EJ SEAL and mineral wool is a total of 150mm.
- Possible orientation of the linear joint seals is presented in Fig. A1 and Table A1.

**Fig. A1.****Table A1**

Joint type in accordance with Annex C	Possible orientation in accordance with Fig. A1
Type 1	B
Type 2 (horizontal)	C
Type 2 (vertical)	B
Type 3	C
Type 4 (horizontal)	C
Type 4 (vertical)	B
Type 5 to 11	A, D
Type 12	B

INTU FR EJ SEAL**Additional provisions**

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- 1 intumescent material, thickness 2,0 mm
 2 incombustible melamine foam, according to Table B1
 a width of the INTU FR EJ SEAL according to Table B1
 b depth of the INTU FR EJ SEAL according to Table B1

Fig. B1. INTU FR EJ SEAL strip

Table B1. Dimensions

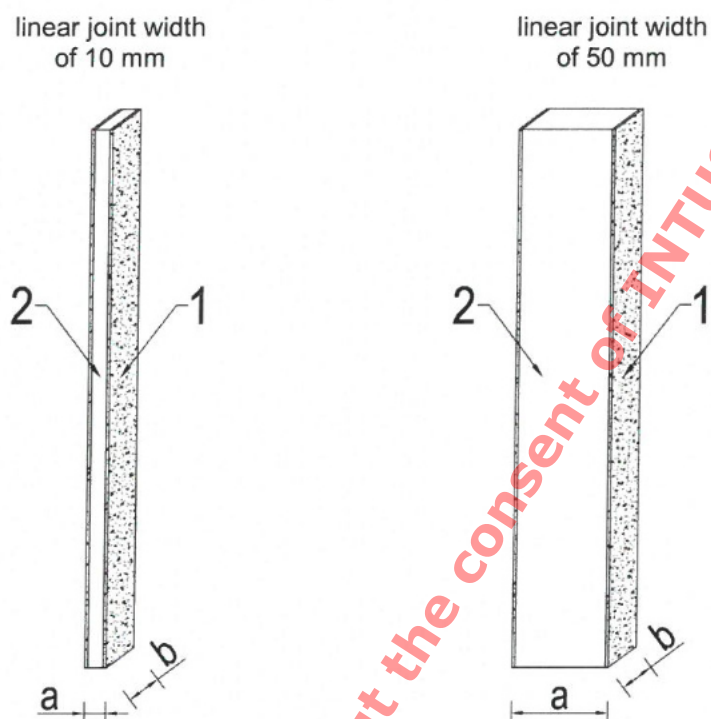
W (width of the joint), mm	a, mm	b, mm	Thickness of layers, mm
≤ 10	14	25	2*) + 10**) + 2*)
11 – 20	36	30	2*) + 20**) + 2*) + 10**) + 2*)
21 – 30	56	35	2*) + 30**) + 2*) + 20**) + 2*)
31 – 40	68	35	2*) + 20**) + 2*) + 20**) + 2*) + 20**) + 2*)
41 – 50	78	40	2*) + 30**) + 2*) + 30**) + 2*) + 10**) + 2*)
* intumescent material			
** melamine foam			

INTU FR EJ SEAL

Range of products

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- 1 intumescent material, thickness 2,0 mm
 2 incombustible melamine foam, according to Table B2
 a width of the INTU FR EJ SEAL according to Table B2
 b depth of the INTU FR EJ SEAL according to Table B2

Fig. B2. INTU FR EJ SEAL strip

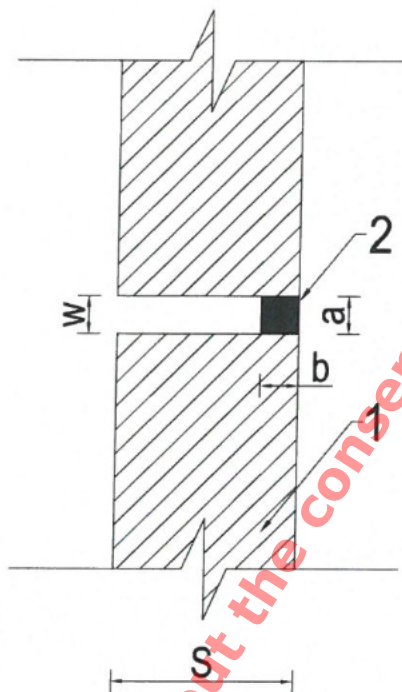
Table B2. Dimensions

W (width of the joint), mm	a, mm	b, mm	Thickness of layers, mm
≤ 10	14	25	2 ^{*)} + 10 ^{**) + 2^{*)}}
11 – 20	34	30	2 ^{*)} + 30 ^{**) + 2^{*)}}
21 – 30	44	35	2 ^{*)} + 40 ^{**) + 2^{*)}}
31 – 40	54	40	2 ^{*)} + 50 ^{**) + 2^{*)}}
41 – 50	64	40	2 ^{*)} + 60 ^{**) + 2^{*)}}
* intumescent material			
** melamine foam			

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Range of products	

Fig. C1. Vertical linear joint seal (type 1) made with use of INTU FR EJ SEAL product in rigid wall.

Dimensions in mm



- 1 rigid wall with thickness $S \geq 150$ mm and density ≥ 600 kg/m³
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- W width of the linear joint seal

Resistance to fire classification of vertical linear joint seal in rigid wall, in accordance with Fig. C1 and Annex A:

Fire resistance class: EI 120 – V – X – B – W 10

Fire resistance class: EI 60 – V – X – B – W 11 to W 30

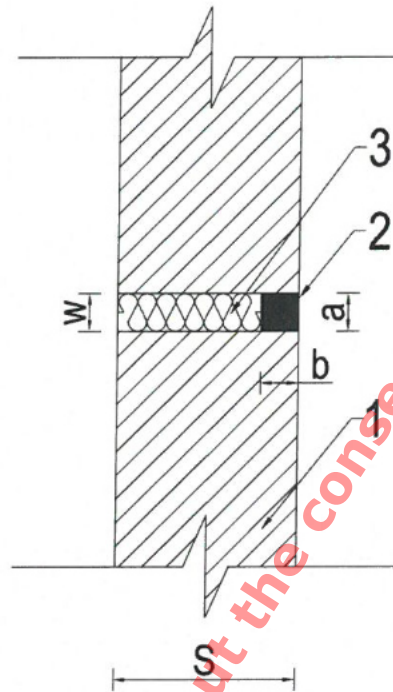
INTU FR EJ SEAL

**Construction details and resistance to fire classification
of linear joint seals**

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Fig. C2. Linear joint seal (type 2) made with use of mineral wool and INTU FR EJ SEAL product in rigid wall.

Dimensions in mm



- 1 rigid wall with thickness $S \geq 150$ mm and density ≥ 600 kg/m³
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- 3 mineral wool (backing material) with a minimum density of 50 kg/m³
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- W width of the linear joint seal

Resistance to fire classification of linear joint seal in rigid wall, in accordance with Fig. C2 and Annex A:

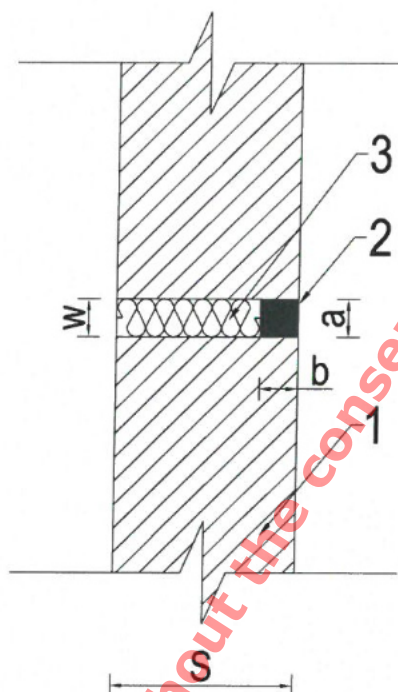
Fire resistance class: EI 120 – V – X – B – W 10 to W 50

Fire resistance class: EI 120 – T – X – B – W 10 to W 50

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Construction details and resistance to fire classification of linear joint seals	

Fig. C3. Horizontal linear joint seal (type 3) made with use of mineral wool and INTU FR EJ SEAL product in rigid wall.

Dimensions in mm



- 1 rigid wall with thickness $S \geq 150$ mm and density ≥ 600 kg/m³
- 2 INTU FR EJ SEAL, in accordance with Fig. B2
- 3 mineral wool (backing material) with a minimum density of 50 kg/m³
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- W width of the linear joint seal

Resistance to fire classification of horizontal linear joint seal in rigid wall, in accordance with Fig. C3 and Annex A:

Fire resistance class: EI 120 – T – X – B – W 10 to W 50

INTU FR EJ SEAL

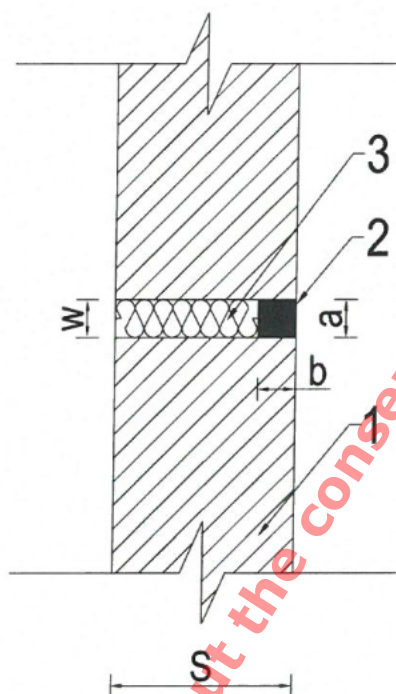
Construction details and resistance to fire classification of linear joint seals

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Fig. C4. Linear joint seal (type 4) made with use of mineral wool and INTU FR EJ SEAL product in rigid wall.

Dimensions in mm



- 1 rigid wall with thickness $S \geq 150$ mm and density ≥ 600 kg/m³
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- 3 mineral wool (backing material) with a minimum density of 50 kg/m³
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- W width of the linear joint seal

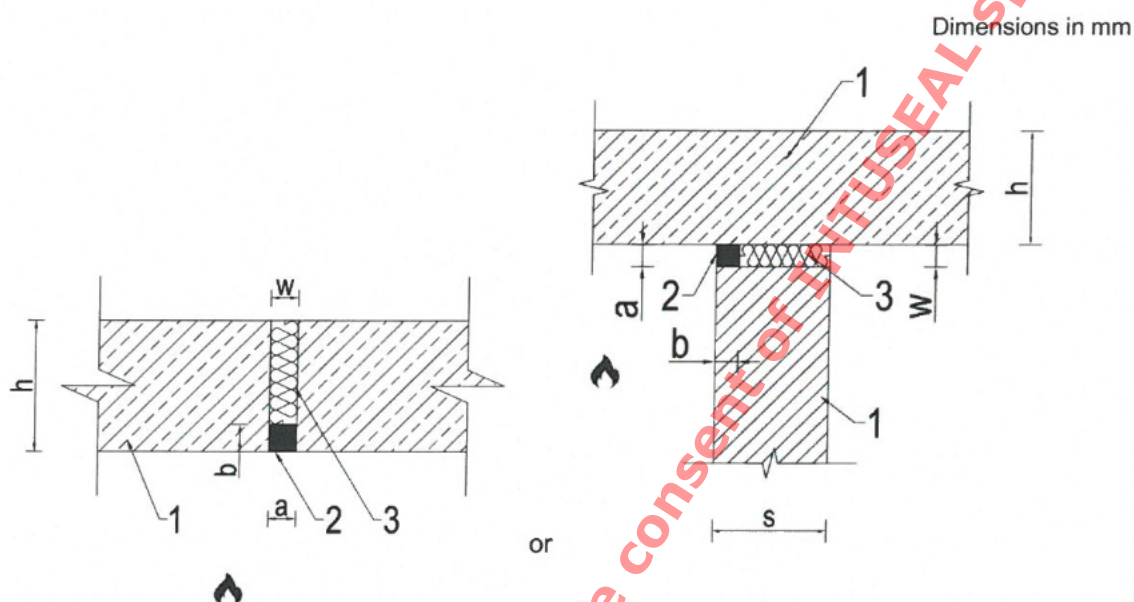
Resistance to fire classification of linear joint seal in rigid wall, in accordance with Fig. C4 and Annex A:

Fire resistance class: EI 120 – V – X – B – W 10 to W 50

Fire resistance class: EI 120 – T – X – B – W 10 to W 50

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Fig. C5. Linear joint seal (type 5) made with use of mineral wool and INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- 3 mineral wool (backing material) with a minimum density of 50 kg/m^3
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- W width of the linear joint seal
- 🔥 indicates the side of the supporting construction which is exposed to fire

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C5 and Annex A:

Fire resistance class: EI 120 – H – X – B – W 10 to W 50

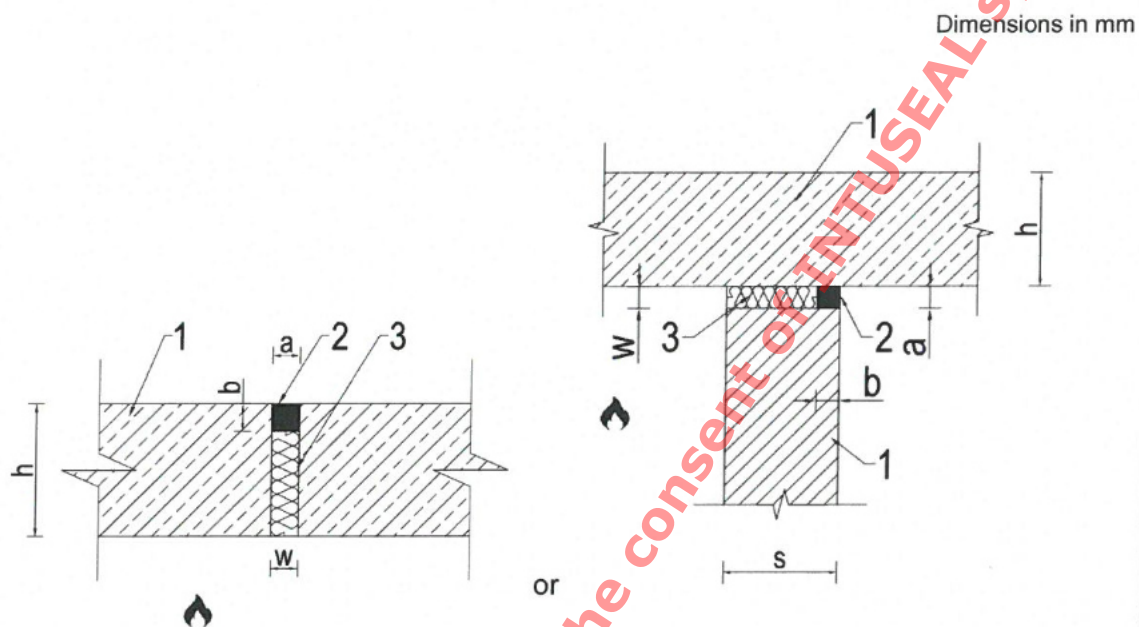
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Fig. C6. Linear joint seal (type 6) made with use of mineral wool and INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- 3 mineral wool (backing material) with a minimum density of 50 kg/m^3
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- W width of the linear joint seal
- 🔥 indicates the side of the supporting construction which is exposed to fire

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C6 and Annex A:

Fire resistance class: EI 120 – H – X – B – W 10 to W 50

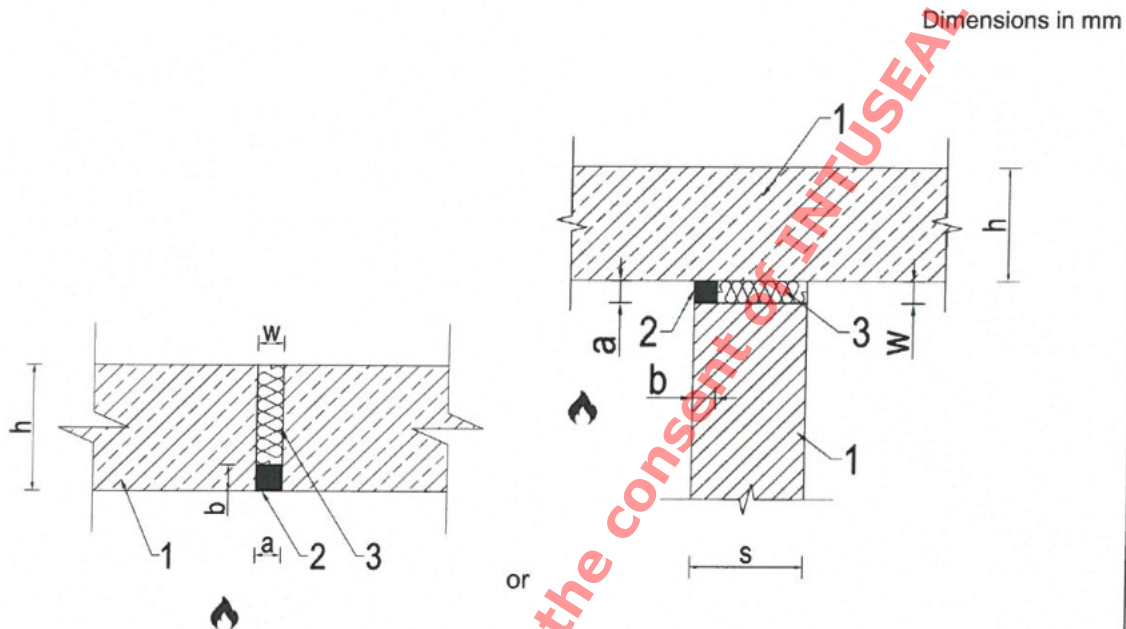
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Construction details and resistance to fire classification of linear joint seals

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Fig. C7. Linear joint seal (type 7) made with use of mineral wool and INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- 3 mineral wool (backing material) with a minimum density of 50 kg/m^3
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- W width of the linear joint seal
- 🔥 indicates the side of the supporting construction which is exposed to fire

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C7 and Annex A:

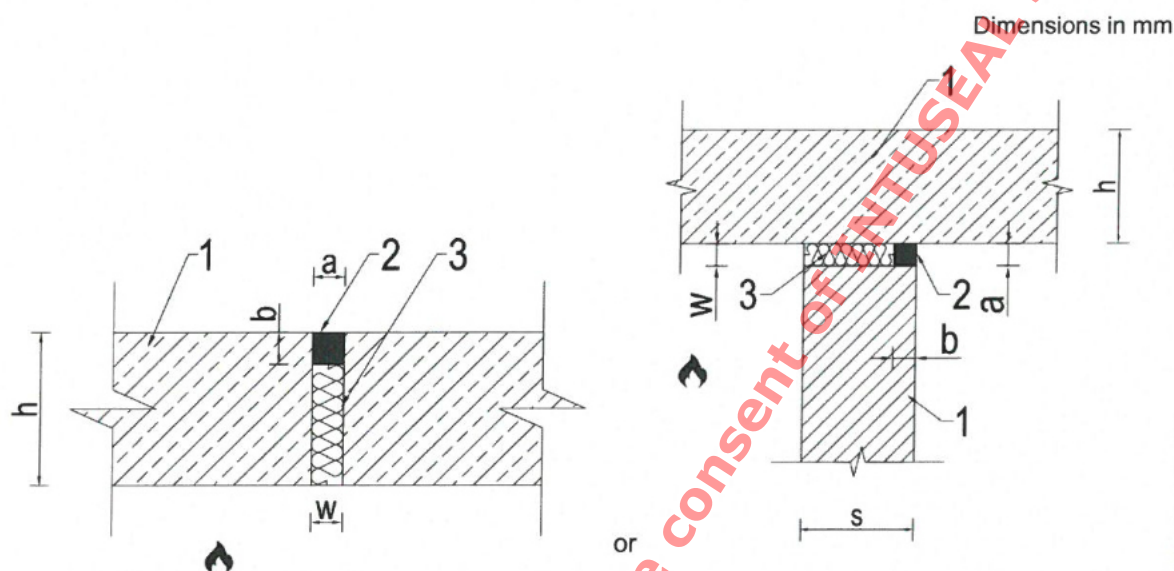
Fire resistance class: EI 120 – H – X – B – W 10 to W 50

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**Construction details and resistance to fire classification
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Fig. C8. Linear joint seal (type 8) made with use of mineral wool and INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- 3 mineral wool (backing material) with a minimum density of 50 kg/m^3
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- W width of the linear joint seal
- indicates the side of the supporting construction which is exposed to fire

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C8 and Annex A:

Fire resistance class: EI 120 – H – X – B – W 10 to W 50

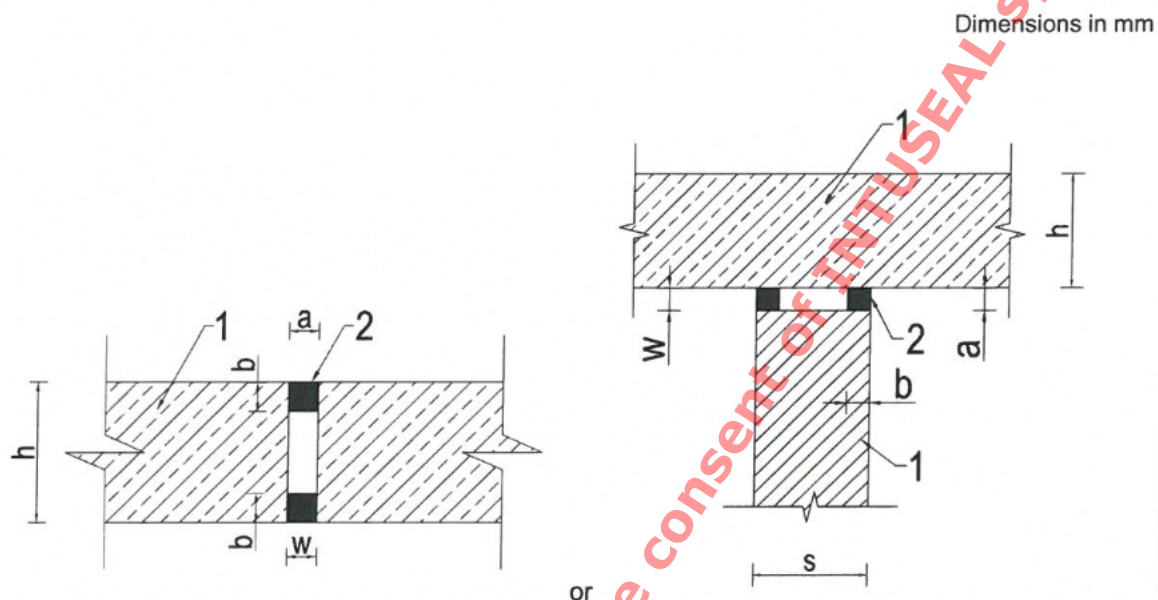
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Fig. C9. Linear joint seal (type 9) made with use of INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



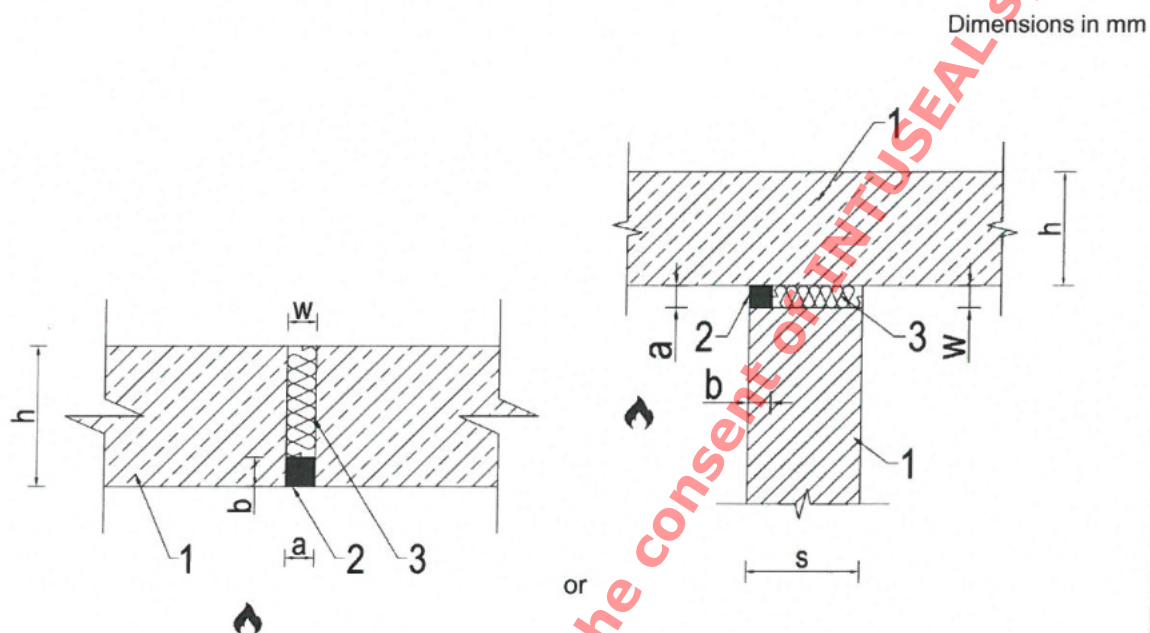
- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B1
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B1
- W width of the linear joint seal

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C9 and Annex A:

Fire resistance class: EI 120 – H – X – B – W 30

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Fig. C10. Linear joint seal (type 10) made with use of mineral wool and INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



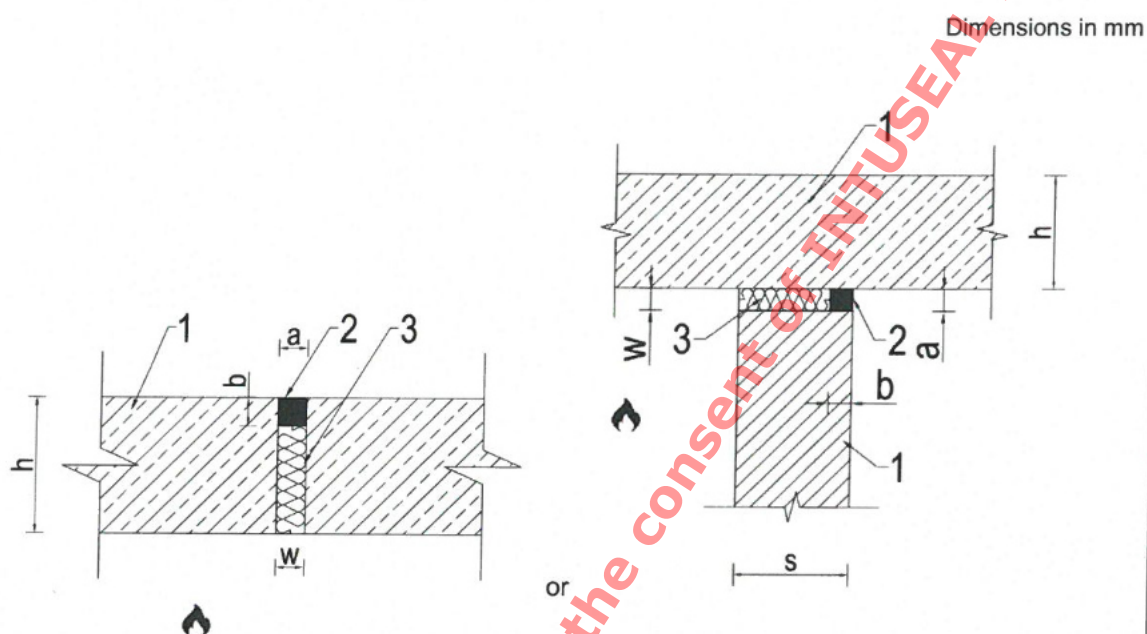
- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B2
- 3 mineral wool (backing material) with a minimum density of 50 kg/m^3
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- W width of the linear joint seal
- indicates the side of the supporting construction which is exposed to fire

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C10 and Annex A:

Fire resistance class: EI 120 – H – X – B – W 10 to W 50

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Construction details and resistance to fire classification of linear joint seals	

Fig. C11. Linear joint seal (type 11) made with use of mineral wool and INTU FR EJ SEAL product in rigid floor or rigid wall abutting a rigid floor.



- 1 rigid floor density $\geq 1700 \text{ kg/m}^3$ or rigid wall density $\geq 600 \text{ kg/m}^3$ and width $s \geq 150 \text{ mm}$ abutting a rigid floor with thickness $h \geq 150 \text{ mm}$
- 2 INTU FR EJ SEAL, in accordance with Fig. B2
- 3 mineral wool (backing material) with a minimum density of 50 kg/m^3
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- W width of the linear joint seal
- indicates the side of the supporting construction which is exposed to fire

Resistance to fire classification of linear joint seal in rigid floor or rigid wall abutting a rigid floor, in accordance with Fig. C11 and Annex A:

Fire resistance class: EI 120 – H – X – B – W 10 to W 50

INTU FR EJ SEAL

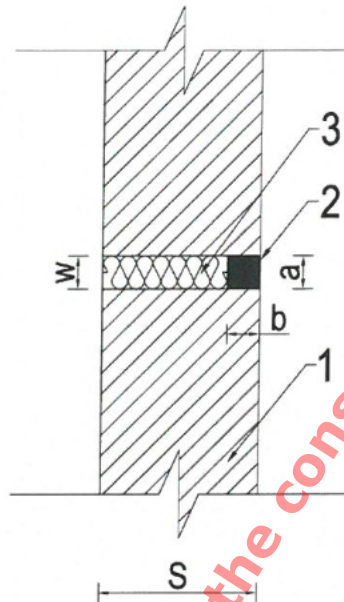
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Fig. C12. Horizontal linear joint seal (type 12) made with use of mineral wool and INTU FR EJ SEAL product in rigid wall.

Dimensions in mm



- 1 rigid wall with thickness $S \geq 150$ mm and density ≥ 600 kg/m³
- 2 INTU FR EJ SEAL, in accordance with Fig. B2
- 3 mineral wool (backing material) with a minimum density of 50 kg/m³
- a width of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- b depth of the INTU FR EJ SEAL (before placement in gap), in accordance with Fig. B2
- W width of the linear joint seal

Resistance to fire classification of horizontal linear joint seal in rigid wall, in accordance with Fig. C12 and Annex A:

Fire resistance class: EI 120 – V – X – B – W 10 to W 30

Fire resistance class: EI 60 – V – X – B – W 31 to W 50

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