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European Technical Assessment

ETA-20/1250
Of 07/06/2022

General part

Technical Assessment Body issuing the European Technical Assessment:
SKG-IKOB Certificatie BV

Trade name of the construction product

Bostik FP 401 Fireseal Acrylic

**Product family to which the
construction product belongs**

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

Manufacturer

Bostik Benelux BV
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Manufacturing plants

P01

**This European Technical Assessment
contains**

11 pages including 2 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**

EAD 350141-00-1106, edition 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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Specific parts

1 Technical description of the product

Bostik FP 401 Fireseal Acrylic is used to form a joint seal in linear joints, voids, gaps and other discontinuities within one or between two or more construction elements to reinstate the fire resistance performance of wall constructions.

Product	Properties
FP 401 Fireseal Acrylic	FP 401 Fireseal Acrylic is an acrylic sealant. Supplied in liquid form contained within 310 ml cartridges and 600 ml sausages. The Sealant is gunned into the linear joint of adjacent separating elements, to a specified depth, if necessary utilizing PE / PU backer rod.

2 Specification of the intended uses in accordance with the applicable Assessment Document (hereinafter EAD)

2.1 Intended use

The intended use of system Bostik FP 401 Fireseal Acrylic is to reinstate the fire resistance performance of linear joints in rigid wall constructions and in rigid floor constructions.

The specific elements of construction that the system Bostik FP 401 Fireseal Acrylic may be used to provide a joint seal in, are as follows:

- Flexible walls
- Rigid walls
- Rigid floors

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. Detailed information and data is given in Annex A.

Environmental conditions are:

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

2.2 Working life

The assumed working life of Bostik FP401 Fireseal Acrylic is for the intended use 25 years, provided that the assembled product is subject to appropriate installation, use and maintenance. The indication of 25 years cannot be interpreted as a guarantee given by Bostik Benelux BV, but should only be regarded as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

The assessment of fitness for use has been made in accordance with EAD 350141-00-1106.

Bostik FP 401 Fireseal Acrylic		
No	Essential Characteristic	Product performances
BWR 2 Safety in case of fire		
1	Reaction to fire	B-s1,d0
2	Resistance to fire	See annex A
BWR 3 Hygiene, health and environment		
3	Content, emission and/or release of dangerous substances	Declaration of manufacturer
4	Air permeability (material property)	No performance assessed
5	Water permeability (material property)	No performance assessed
BWR 4 Safety and accessibility in use		
6	Mechanical resistance and stability	No performance assessed
7	Resistance to impact/movement	No performance assessed
8	Adhesion	passed
9	Durability	Z ₂
10	Movement capability	See annex A
11	Cycling of perimeter seals for curtain walls	Not relevant
12	Compression set	Not relevant
13	Linear expansion on setting	Not relevant
BWR 5 Protection against noise		
14	Airborne sound insulation	See annex B
BWR 6 Energy economy and heat retention		
15	Thermal properties	No performance assessed
16	Water vapour permeability	No performance assessed

4 Assessment and verification of consistency 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 <http://eur-lex.europa.eu/JOIndex.do> 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 07/06/2022 relating to the European technical assessment ETA 20/1250 issued on 07/06/2022 which is part of the technical documentation of this European technical approval. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at SKG-IKOB.

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

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:

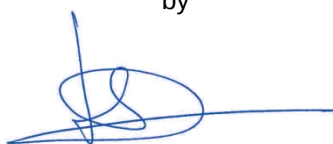
- Field of application:
- Building elements for which the linear joint seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the linear joint seal
- Construction of the linear joint seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.

(b) Installation instruction:

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

Issued in Geldermalsen, the Netherlands on 07/06/2022

The original English version is signed on behalf of SKG-IKOB
by



ir. H.A.J. van Dartel
Certification Manager

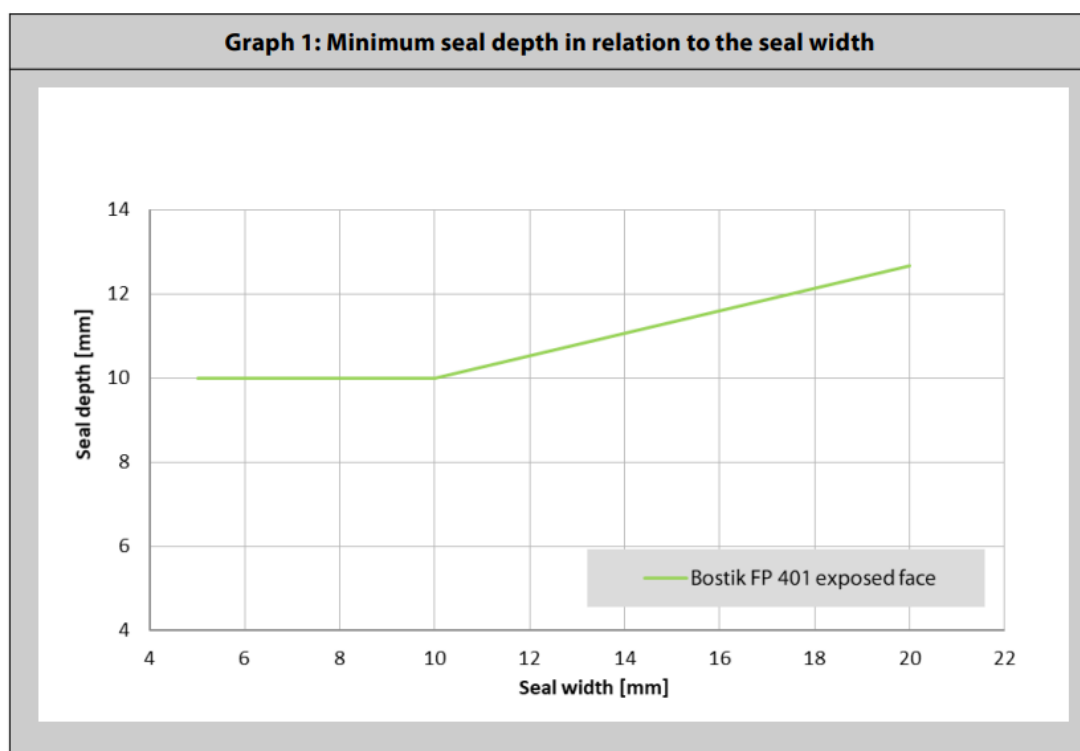
Annex A – Resistance to fire

Fire resistance classification (vertical linear joint seals in a stone wall)	
Stone to stone wall thickness ≥ 70 mm	
Bostik FP 401 exposed face Bostik FP 404 unexposed face EI 45 – V – X – F – W 8 to 20 E 240 – V – X – F – W 8 to 20	Bostik FP 401 applied at unexposed face EI 45 – V – X – F – W 5 to 10 EI 30 – V – X – F – W 10 to 20 E 240 – V – X – F – W 5 to 20

E = Criterion integrity, I = Criterion insulation, V = Vertical application in a vertical wall, X = No movement applied, F = Splice applied in the field, W = Permitted width range in millimetres (see Graph 1 for seal depth)

The following conditions apply:

- the classifications are valid for linear joint seals in a wall with an orientation as mentioned (vertical);
- the linear joint seals may be applied in any type of wall of aerated concrete (class G4/600 or heavier), concrete, limestone or masonry with a minimal thickness as mentioned (70 mm);
- the surfaces of the material on which FP 401 Fireseal Acrylic and FP 404 Fire Retardant PU (Gun)Foam is applied are thoroughly cleaned and treated with primer and moistened with water when needed. Except for the fully filled linear joint seals, the use of suitable PE / PU backing material is mandatory;
- the depth of FP 401 Fireseal Acrylic depends on the width of the linear joint seal. The minimum depth of FP 401 Fireseal Acrylic in relation to the width of the linear joint seal is shown in Graph 1 below. The depth of the sealant may also be increased with respect to the Graph (the lines are the minimum and recommended seal depth). Where the rest of the slot is fully filled with FP 404 Fire Retardant PU (Gun)Foam the seal depth of the FP 401 Fireseal Acrylic is minimal 3 mm;
- the allowed movement capability in practice is maximized to 7.5 %;
- when FP 401 Fireseal Acrylic is applied at one face, the classifications are valid for FP 401 Fireseal Acrylic at the unexposed face or at the exposed face when in combination with FP 404 Fire Retardant PU (Gun)Foam.

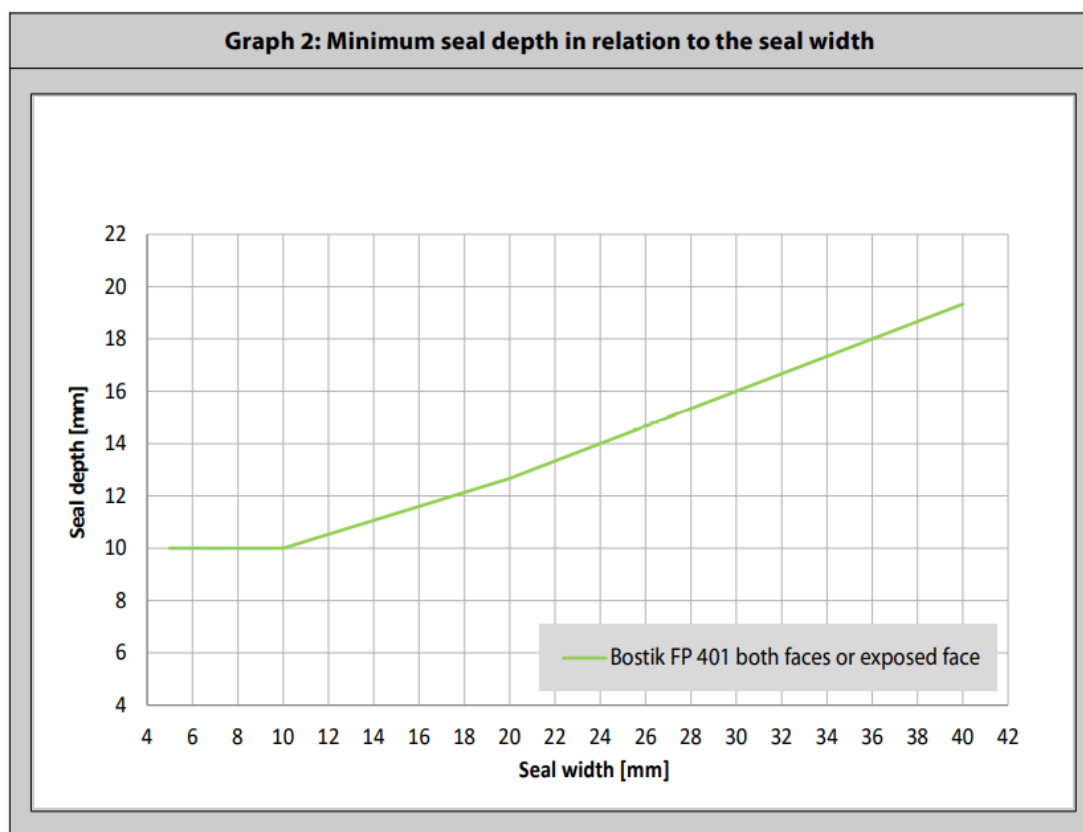


Fire resistance classification (vertical linear joint seals in a stone wall)		
Stone to stone Wall thickness ≥ 100 mm		
Bostik FP 401 applied at both faces EI 180 – V – X – F – W 5 to 10 EI 240 – V – X – F – W 10 to 40 E 240 – V – X – F – W 5 to 40	Bostik FP 401 applied at exposed face EI 180 – V – X – F – W 5 to 40	Bostik FP 401 exposed face Bostik FP 404 unexposed face EI 90 – V – X – F – W 8 to 30 E 120 – V – X – F – W 8 to 30 EI 30 – V – X – F – W 30 to 40

E = Criterion integrity, I = Criterion insulation, V = Vertical application in a vertical wall, X = No movement applied, F = Splice applied in the field, W = Permitted width range in millimetres (see Graph 1 for seal depth)

The following conditions apply:

- the classifications are valid for linear joint seals in a wall with an orientation as mentioned (vertical);
- the linear joint seals may be applied in any type of wall of aerated concrete (class G4/600 or heavier), concrete, limestone or masonry with a minimal thickness as mentioned (100 mm);
- the surfaces of the material on which FP 401 Fireseal Acrylic and FP 404 Fire Retardant PU (Gun)Foam is applied are thoroughly cleaned and treated with primer and moistened with water when needed. Except for the fully filled linear joint seals, the use of suitable PE / PU backing material is mandatory;
- the depth of FP 401 Fireseal Acrylic depends on the width of the linear joint seal. The minimum depth of FP 401 Fireseal Acrylic in relation to the width of the linear joint seal is shown in Graph 2 below. The depth of the sealant may also be increased with respect to the Graph (the lines are the minimum and recommended seal depth). Where the rest of the slot is fully filled with FP 404 Fire Retardant PU (Gun)Foam the seal depth of the FP 401 Fireseal Acrylic is minimal 3 mm;
- the allowed movement capability in practice is maximized to 7.5 %;
- when FP 401 Fireseal Acrylic is applied at both faces, the classifications are valid for both directions. When FP 401 Fireseal Acrylic is applied at one face, the classifications are valid for FP 401 Fireseal Acrylic at the exposed face.

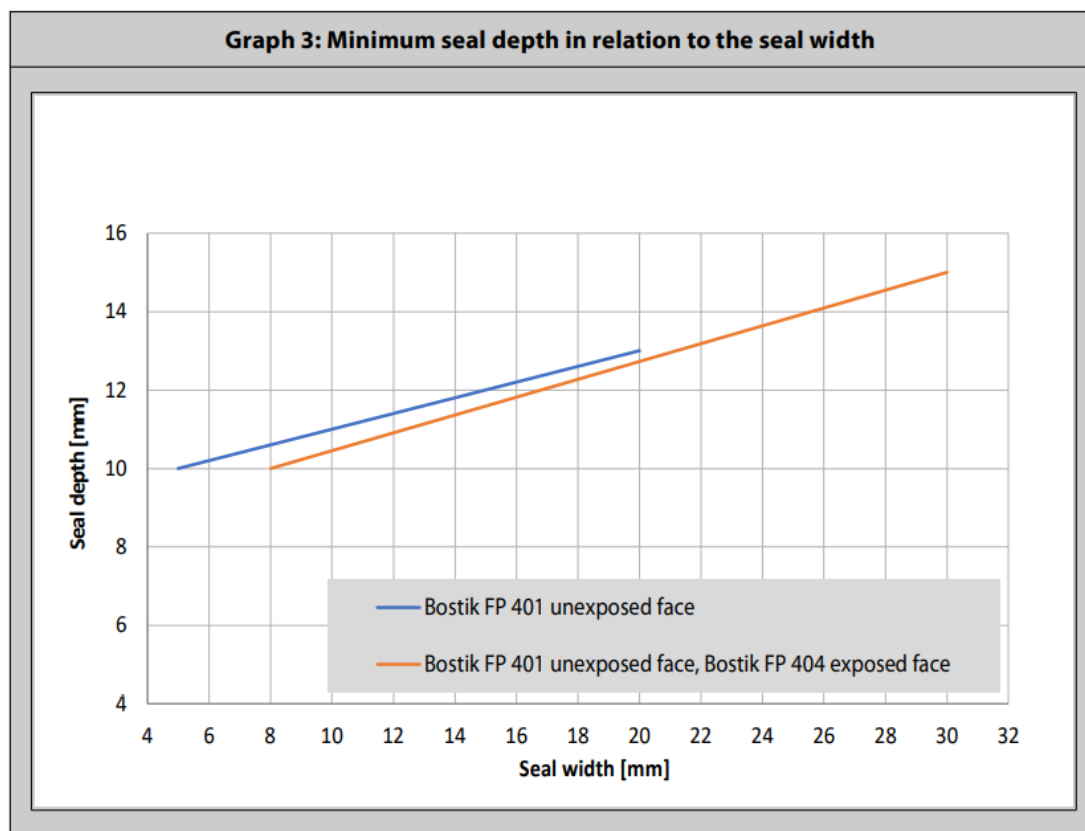


Fire resistance classification (vertical linear joint seals in a stone wall)	
Stone to stone wall thickness ≥ 115 mm	
Bostik FP 401 unexposed face Bostik FP 404 exposed face EI 180 – V – X – F – W 8 to 30 EI 240 – V – X – F – W 8 E 240 – V – X – F – W 8 to 30	Bostik FP 401 applied at unexposed face EI 45 – V – X – F – W 5 to 20 EI 240 – V – X – F – W 5 E 240 – V – X – F – W 5 to 20

E = Criterion integrity, I = Criterion insulation, V = Vertical application in a vertical wall, X = No movement applied, F = Splice applied in the field, W = Permitted width range in millimetres (see Graph 1 for seal depth)

The following conditions apply:

- the classifications are valid for linear joint seals in a wall with an orientation as mentioned (vertical);
- the linear joint seals may be applied in any type of wall of aerated concrete (class G4/600 or heavier), concrete, limestone or masonry with a minimal thickness as mentioned (115 mm);
- the surfaces of the material on which FP 401 Fireseal Acrylic and FP 404 Fire Retardant PU (Gun)Foam is applied are thoroughly cleaned and treated with primer and moistened with water when needed. Except for the fully filled linear joint seals, the use of suitable PE / PU backing material is mandatory;
- the depth of FP 401 Fireseal Acrylic depends on the width of the linear joint seal. The minimum depth of FP 401 Fireseal Acrylic in relation to the width of the linear joint seal is shown in Graph 3 below. The depth of the sealant may also be increased with respect to the Graph (the lines are the minimum and recommended seal depth). If applicable, the rest of the slot is fully filled with FP 404 Fire Retardant PU (Gun)Foam;
- the allowed movement capability in practice is maximized to 7.5 %;
- when FP 401 Fireseal Acrylic is applied at both faces, the classifications are valid for both directions. When FP 401 Fireseal Acrylic is applied at one face, the classifications are valid for FP 401 Fireseal Acrylic at the unexposed face.

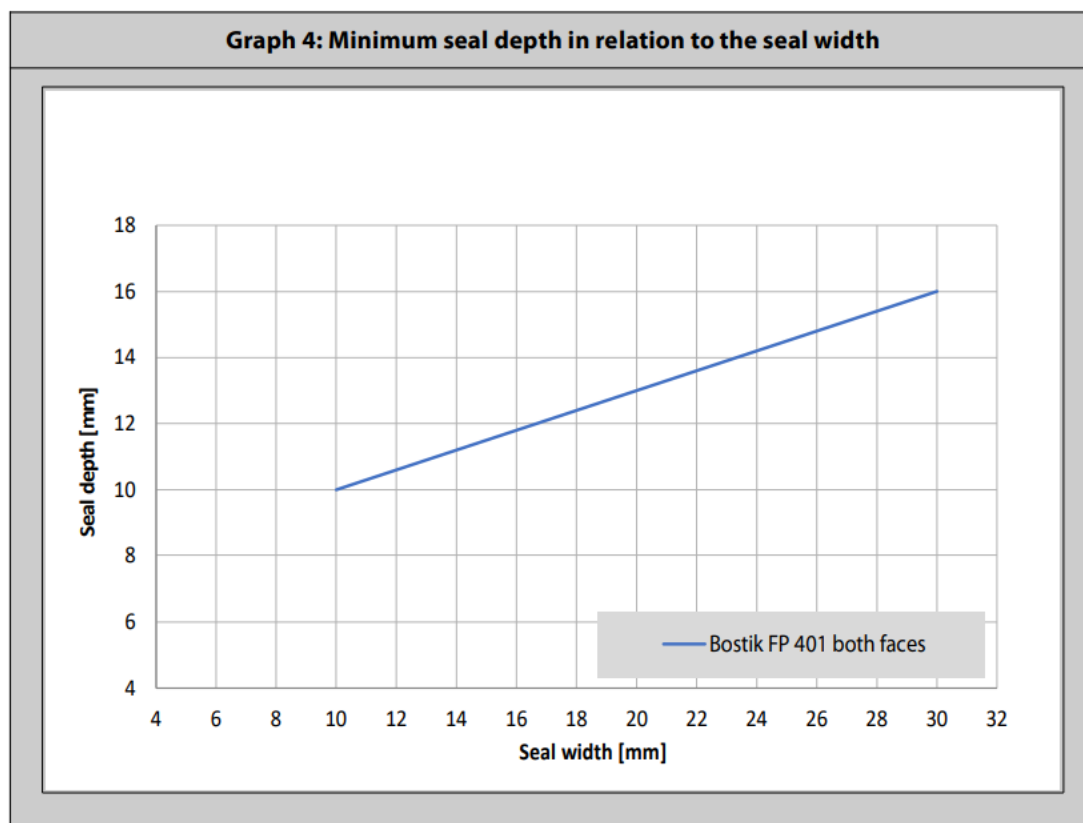


Fire resistance classification (horizontal linear joint seals in a stone wall and a wall abutting a floor, ceiling or roof)
Applied connecting stone to stone, thickness wall ≥ 100 mm
Bostik FP 401 applied at both faces EI 180 – T – M 5 – F – W 10 to 30 E 240 – T – M 5 – F – W 10 to 30

E = Criterion integrity, I = Criterion insulation, T = Horizontal application in a vertical wall and a wall abutting a floor, M = Movement induced in %, F = Splice applied in the field, W = Permitted width range in millimetres (see Graph 2 for seal depth)

The following conditions apply:

- the classifications are valid for linear joint seals in a wall and a wall abutting a floor, ceiling or roof with an orientation as mentioned (horizontal);
- the linear joint seals may connect to any type of construction of aerated concrete (class G4/600 or heavier), concrete, block work or masonry with a minimal thickness as mentioned (100 mm);
- the surfaces of the material on which FP 401 Fireseal Acrylic is applied are thoroughly cleaned and treated with Primer when needed;
- the use of suitable PE / PU backing material is mandatory;
- the required depth of FP 401 Fireseal Acrylic depends on the width of the linear joint seal. The minimum depth of FP 401 Fireseal Acrylic in relation to the width of the linear joint seal is shown in Graph 4 below. The required depth of the sealant may also be increased with respect to the Graph (the lines are the minimum and recommended seal depth);
- deformation of the linear joint seals in practice is maximized to 7.5 %;
- the classifications are valid for both directions.

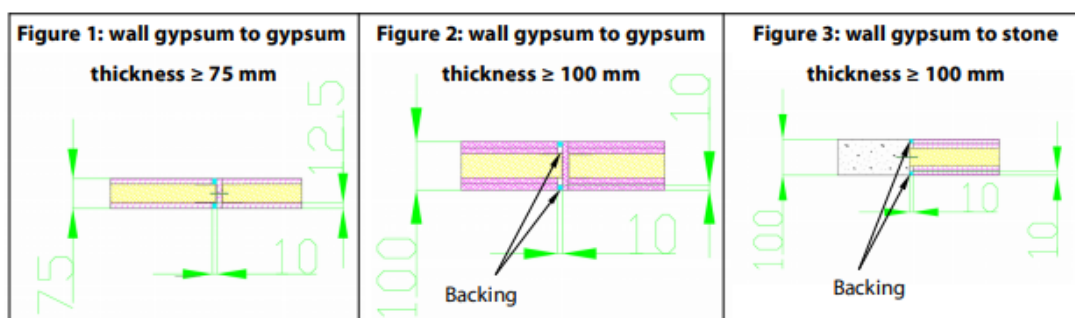


Fire resistance classification (vertical linear joint seal in a gypsum and / or stone wall)		
Bostik FP 401 applied at both faces connecting gypsum to gypsum		Bostik FP 401 applied at both faces connecting gypsum to stone
Wall thickness ≥ 75 mm (see Figure 1) EI 60 – V – X – F – W 10	Wall thickness ≥ 100 mm (see Figure 2) EI 120 – V – X – F – W 10 E 180 – V – X – F – W 10	Wall thickness ≥ 100 mm (see Figure 3) EI 120 – V – X – F – W 10 E 180 – V – X – F – W 10

E = Criterion integrity, I = Criterion insulation, V = Vertical application in a vertical wall, X = No movement applied, F = Splice applied in the field, W = Permitted width range in millimetres

The following conditions apply:

- the classifications are valid for linear joint seals in a wall with an orientation as mentioned (vertical);
- the linear joint seals in wall with a thickness ≥ 100 mm may connect on one side to any type of wall of aerated concrete (class G4/600 or heavier), concrete, block work, limestone or masonry with a minimal thickness as mentioned (100 mm). In practice, the metal profiles of the gypsum wall are mechanically fixed at a distance every 300 mm or less. Mechanically fixation of the metal profiles is mandatory;
- the linear joint seals may connect on both sided to a gypsum wall with a minimum thickness as mentioned (75 or 100 mm). In practice, the metal profiles of the gypsum wall are mechanically fixed at a distance every 300 mm or less. Mechanically fixation of the metal profiles is mandatory;
- the classifications are only valid for constructions shown in Figures 1 to 3;
- the surfaces of the material on which the sealant is applied are thoroughly cleaned and treated with primer when needed;
- the depth of FP 401 Fireseal Acrylic in a wall of 75 mm is 12.5 mm at both faces, representing the full thickness of the gypsum panel, see Figure 1. The depth of FP 401 Fireseal Acrylic in a wall of 100 mm is 10 mm at both faces. The rest of the cavity is filled up with suitable PE / PU backing material, see Figure 2 and 3;
- the allowed movement capability in practice is maximized to 7.5 %;
- the classifications are valid for both directions.

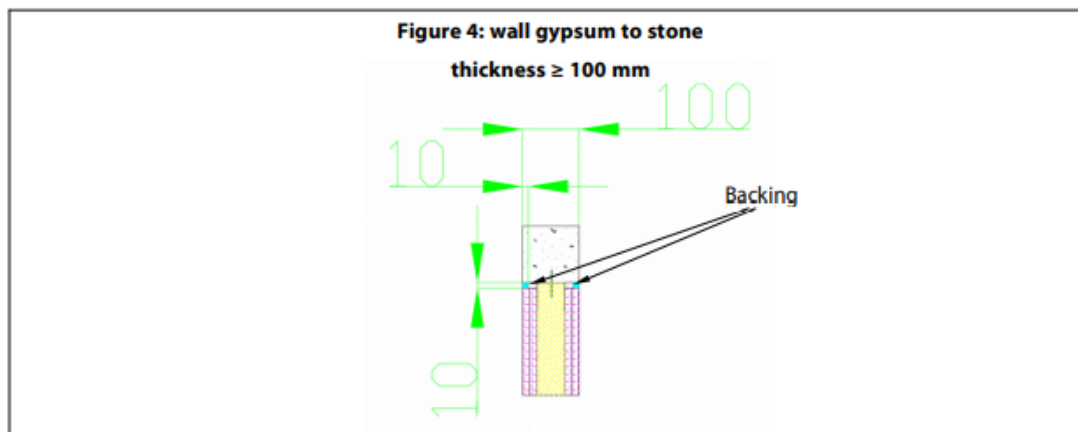


Fire resistance classification (horizontal linear joint seals in a gypsum and stone wall)
Bostik FP 401 applied at both faces connecting gypsum to stone
Thickness wall ≥ 100 mm (see Figure 4)
EI 120 – T – X – F – W 10
E 180 – T – X – F – W 10

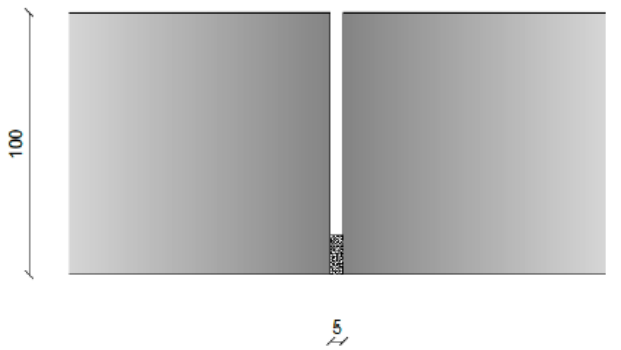
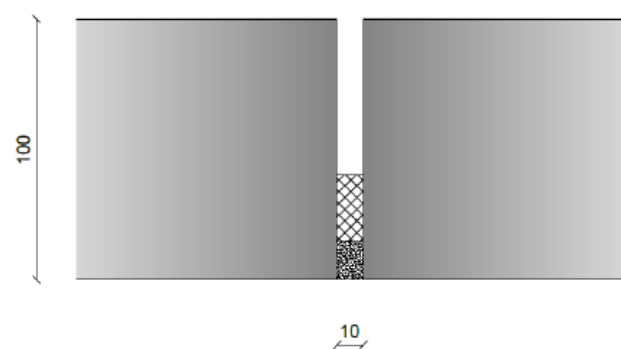
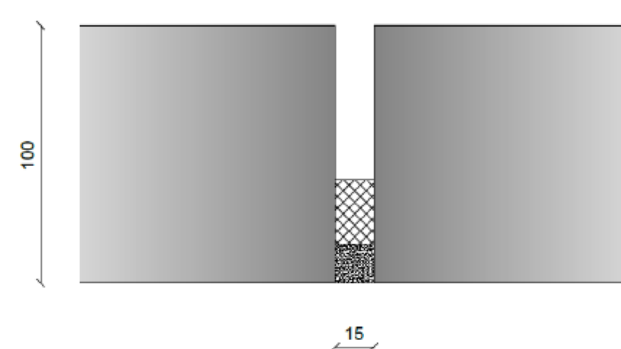
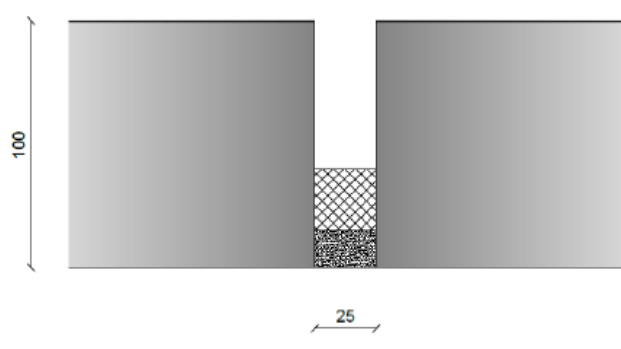
E = Criterion integrity, I = Criterion insulation, T = Horizontal application in a vertical wall, X = No movement applied, F = Splice applied in the field, W = Permitted width range in millimetres

The following conditions apply:

- the classifications are valid for linear joint seals in a wall with an orientation as mentioned (horizontal);
- the linear joint seals in wall with a thickness ≥ 100 mm may connect on one side to any type of wall of aerated concrete (class G4/600 or heavier), concrete, block work, limestone or masonry with a minimal thickness as mentioned (100 mm). In practice, the metal profiles of the gypsum wall are mechanically fixed at a distance every 300 mm or less. Mechanically fixation of the metal profiles is mandatory;
- the linear joint seals may connect on the other side to a gypsum wall with a minimum thickness as mentioned (100 mm). In practice, the metal profiles of the gypsum wall are mechanically fixed at a distance every 300 mm or less. Mechanically fixation of the metal profiles is mandatory;
- the surfaces of the material on which FP 401 Fireseal Acrylic is applied are thoroughly cleaned and treated with Primer when needed;
- the use of suitable PE / PU backing material is mandatory;
- the depth of FP 401 Fireseal Acrylic in a wall of 100 mm is 10 mm at both faces. The rest of the cavity is filled up with suitable PE / PU backing material, see Figure 4;
- deformation of the linear joint seals in practice is maximized to 7.5 %;
- the classifications are valid for both directions.



Annex B – Airborne sound insulation

Joint Width = 5 mm	
Joint Width = 10 mm	
Joint Width = 15 mm	
Joint Width = 25 mm	

The Bostik FP 401 Fireseal Acrylic sealant, 10 mm depth is backed with PU / PE backer rod.

	Joint width			
	5 mm	10 mm	15 mm	25 mm
$R_{s,w}(C;C_{tr})$	52(-1;-3) dB	53(-1;-4) dB	53(-1;-3) dB	49(-2;-4) dB
$C_{100-5000};C_{tr;100-5000}$	(0;-3) dB	(0;-4) dB	(0;-3) dB	(-1;-4) dB
$C_{50-3150};C_{tr;50-3150}$	(-1;-7) dB	(-1;-7) dB	(-1;-7) dB	(-2;-7) dB
$C_{50-5000};C_{tr;50-5000}$	(0;-7) dB	(0;-7) dB	(-1;-5) dB	(-1;-7) dB
$D_{n,e,w}$	59 dB	60 dB	60 dB	56 dB
R_w	29 dB	33 dB	35 dB	33 dB