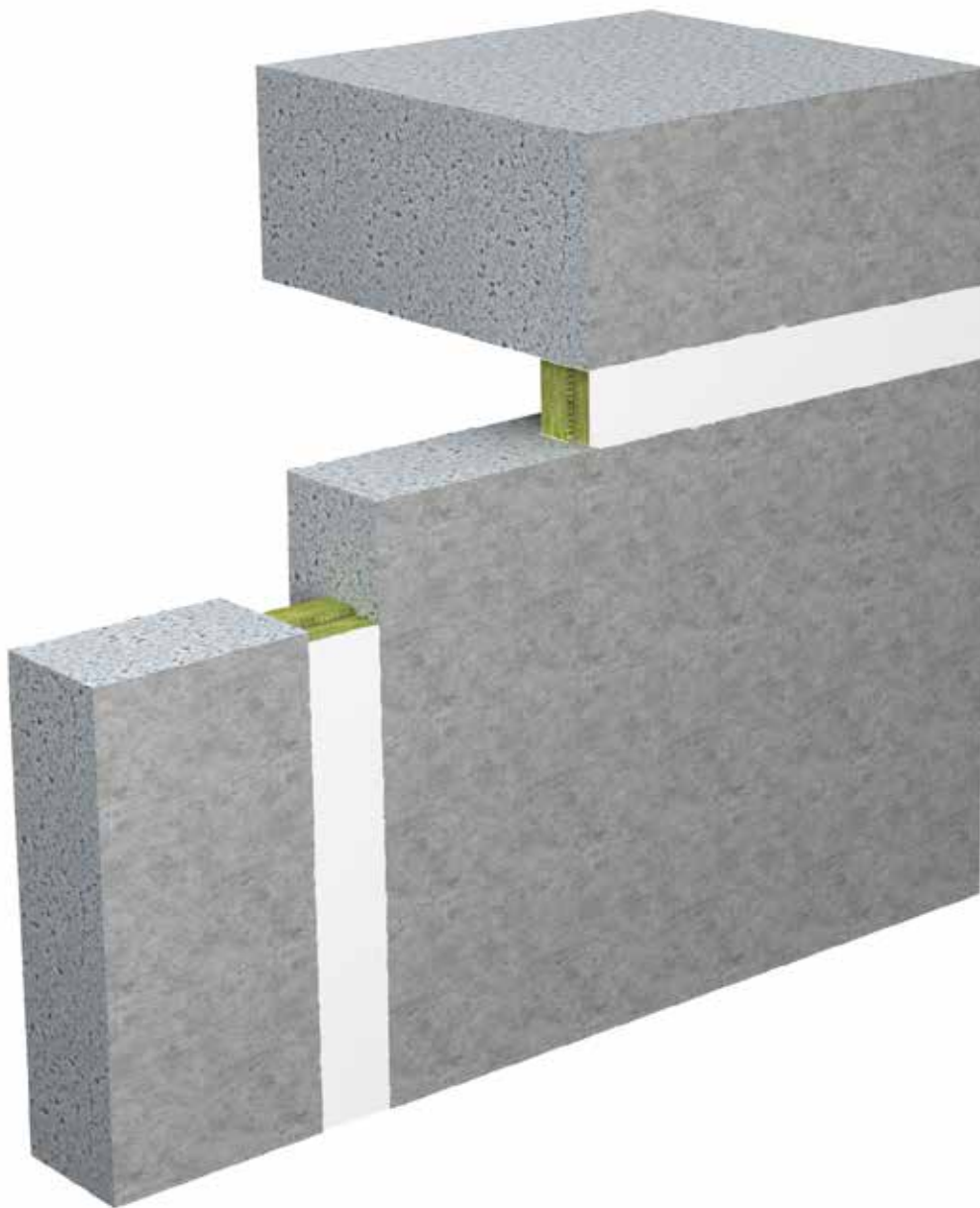


# PYRO-SAFE Fugenabdichtung joint sealing system

## Instructions for installation / Technical data sheet

**Linear joint and gap seal made from mineral-fibre boards and intumescent coating**

**Fire resistance class up to EI 120 – H – V – T – X – B – W 20 to 100 in accordance with EN 13501-2 and ETA-13/0543.**



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# PYRO-SAFE Fugenabdichtung joint sealing system

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# PYRO-SAFE Fugenabdichtung joint sealing system

## Target group

- The instructions for installation are only intended for persons with the necessary fire safety qualification.

## Use of the instructions

- Be sure that you have read the complete instructions for installation before starting any work. Note, in particular, the safety information below.
- The licence owner shall not be held liable for any damage that may result from failure to observe these instructions.
- Illustrations are only included as examples. Completed installations may look slightly different.

## Safety information

Consult the safety data sheets when working with the joint sealing components.



### Personal protective equipment:



In case of short-term or low-level exposure: P2 particle filter.  
In case of intensive or long-term exposure: use self-contained breathing apparatus.  
Only use respirators that comply with international/national standards.



Hand protection  
Use chemicals-resistant protective gloves.  
Recommended material: butyl rubber, nitrile rubber, fluoro rubber, PVC.



Eye protection  
Use protective goggles, wrap-around glasses.



Body protection  
Wear industrial protective clothing and non-slip shoes.

Safety information for installation of floor-mounted penetration seals:



- The area below the floor penetration seal must be cordoned off while work on the penetration seal is underway (warning tape, or sign: danger - falling objects; keep off this area; sealing work underway in the floor above!!)

# PYRO-SAFE Fugenabdichtung joint sealing system

## Field of application

The suitability of the "PYRO-SAFE Fugenabdichtung" joint sealing system has been assessed in accordance with ETAG 026-3 respecting the properties reaction to fire, resistance to fire, release of dangerous substances, and durability and serviceability.

### Reaction to fire

The "PYRO-SAFE FLAMMOPLAST KS1" and "PYRO-SAFE FLAMMOPLAST KS3" intumescent components comply with reaction to fire performance class E of EN 13501-1; the "ProRox SL 970<sup>D</sup>"; "Paroc Pro Slab 120"; "Hochtemperaturplatte HTB 680" mineral-fibre boards and the loose "ProRox LF 970" mineral wool comply with reaction to fire performance class A1 of EN 13501-1.

### Resistance to fire

The maximum requirements that the "PYRO-SAFE Fugenabdichtung" joint sealing system complies with are those of class EI 120 – H – V – T – X – B – W 20 to 100.

- Installation (A) EI 120 – H – X – B – W 20 to 100 (horizontal joint in/between floors, or walls and floors)
- Installation (B) EI 120 – V – X – B – W 20 to 100 (vertical joint in/between walls)
- Installation (C) EI 120 – T – X – B – W 20 to 100 (horizontal joint in walls)

Movement capability "X" - no movement  
 Type of abutment joints "B" – both prefabricated and prepared on site  
 Joint widths W [mm]

When the joint seal is installed in/between structural elements with a lower fire resistance time, the fire resistance time of the joint is also reduced to the fire resistance class of the structural elements.

### Release of dangerous substances

The "PYRO-SAFE FLAMMOPLAST KS1" and "PYRO-SAFE FLAMMOPLAST KS3" intumescent components do not contain any substances that are identified as dangerous substances in the list of the European Commission.  
 The "ProRox SL 970<sup>D</sup>"; "Paroc Pro Slab 120"; "Hochtemperaturplatte HTB 680" mineral-fibre boards and the loose "ProRox LF 970" mineral wool do not contain any dangerous substances that are listed in Directive 67/548/EC or Regulation (EC) No. 1272/2008 or the Indicative List on Dangerous Substances.

### Durability and serviceability

The "PYRO-SAFE FLAMMOPLAST KS1" and "PYRO-SAFE FLAMMOPLAST KS3" intumescent components comply with use category Z<sub>1</sub> in accordance with ETAG 026-3.  
 The fire safety characteristics of the products do not have to be expected to be affected in any significant way, when the products are exposed to indoor climates with temperatures between 0 °C and 40 °C and under conditions of occasional drying moisture, without the influence of UV radiation and driving rain.

 0761
svt Brandschutz Vertriebsgesellschaft mbH International Gluesinger Strasse 86 D-21217 Seevetal 13 0761-CPD-0351
ETA-13/0543 ETAG 026 - Part 3 Linienförmige Fugenabdichtungen und Brandsperren/Linear Joint and Gap Seal Fugenfüllung-System „PYRO-SAFE Fugenabdichtung“ Joint filling system „PYRO-SAFE Fugenabdichtung“ Beschichtung/coating „PYRO-SAFE FLAMMOPLAST KS1“ bzw. Spachtelmasse/resp. filler „PYRO-SAFE FLAMMOPLAST KS3“ Nutzungskategorie/use category: Z <sub>1</sub> , Z <sub>2</sub> für weitere relevante Produktmerkmale (z.B. Feuerwiderstandsklasse, Abgabe gefährliche Stoffe) siehe ETA-13/0543/see ETA 13/0543 for other relevant characteristics (i.e. fire resistance class, dangerous substances)

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# PYRO-SAFE Fugenabdichtung joint sealing system

## Description of the product and intended use

### Description of the joint sealing system

- The “PYRO-SAFE Fugenabdichtung“ joint sealing system primarily consists of “ProRoy SL 970D“ alternatively “Paroc Pro Slab 120“ or “Hochtemperaturplatte HTB 680“ mineral-fibre boards (mineral-fibre board in accordance with EN 14303, thickness  $\geq 50$  mm, nominal apparent density  $\geq 120$  kg/m<sup>3</sup>, reaction to fire performance class in accordance with EN 13501-1. E); the “PYRO-SAFE FLAMMOPLAST KS1“ intumescent coating; the “PYRO-SAFE FLAMMOPLAST KS3“ intumescent filler; and the loose “ProRox LF 970“ mineral wool (reaction to fire performance class in accordance with EN 13501-1. E).
- The “PYRO-SAFE Fugenabdichtung“ joint sealing system cannot be used for the transmission of forces.
- The maximum lateral expansibility of the joint sealing system is 7.4 %.

### Intended use/structural elements

The “PYRO-SAFE Fugenabdichtung“ joint sealing system is used for closing horizontal and vertical linear joints (joints in structural elements in the form of linear abutment joints)

- in or between fire-resistant separating walls
- in or between fire-resistant separating floors
- in or between fire-resistant separating walls and floors

The joint sealing system may be used for closing linear joints in connection with the following separating structural elements:

#### Fireproof walls


made from masonry, concrete, reinforced concrete or aerated concrete with a density  $\geq 600$  kg/m<sup>3</sup>  $\pm 20$  % and a thickness  $\geq 180$  mm. The walls must be classified for the desired fire resistance time in accordance with EN 13501-2.


#### Fireproof floors


made from concrete, reinforced concrete, with a density  $\geq 2,200$  kg/m<sup>3</sup>  $\pm 20$  % and a thickness  $\geq 180$  mm. The floors must be classified for the desired fire resistance time in accordance with EN 13501-2.


# PYRO-SAFE Fugenabdichtung joint sealing system

## Products that can be used

	<p><b>PYRO-SAFE FLAMMOPLAST KS1</b> <b>Fire protective coating</b></p> <p>Reaction-to-fire performance class in accordance with EN 13501-1: class E 12.5-kg pail - product No. 01151001</p>
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	<p><b>PYRO-SAFE FLAMMOPLAST - KS 3</b> <b>Fire protective filler</b></p> <p>Reaction-to-fire performance class in accordance with EN 13501-1: class E 12.5-kg pail - product No. 01152001</p>
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	<p><b>SIBRALIT DX</b> <b>Fire protective filler</b></p> <p>(formulation identical with PYRO-SAFE FLAMMOPLAST KS 3) Reaction-to-fire performance class in accordance with EN 13501-1: class E 300-ml cartridge - product No. 01152004</p>
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	<p><b>Mineral wool</b></p> <p>Reaction-to-fire performance class in accordance with EN 13501-1: class A1 Melting point &gt; 1000 °C 10-kg bag - product No. 01183000</p>
---	--

	<p><b>Mineral-fibre board in accordance with EN 14303</b></p> <p><b>“PRO ROX SL 970<sup>D</sup>“</b></p> <p>Reaction to fire performance class in accordance with EN 13501-1: class A1 Dimensions 1,000 x 600 x 50 mm</p> <p>It is allowed to apply identical mineral-fibre boards if they match the following criteria: Nominal bulk density <math>\geq 120 \text{ kg / m}^3</math> Building material class A1 in accordance with EN 13501-1 Melting point <math>\geq 1.000^\circ\text{C}</math>. Thickness <math>\geq 50 \text{ mm}</math></p>
---	--

	<p><b>Mineral-fibre board in accordance with EN 14303</b></p> <p><b>“PAROC Pro Slab 120“</b></p> <p>Reaction to fire performance class in accordance with EN 13501-1: class A1 Dimensions 1,000 x 600 x 50 mm</p> <p>It is allowed to apply identical mineral-fibre boards if they match the following criteria: Nominal bulk density <math>\geq 120 \text{ kg / m}^3</math> Building material class A1 in accordance with EN 13501-1 Melting point <math>\geq 1.000^\circ\text{C}</math>. Thickness <math>\geq 50 \text{ mm}</math></p>
--	--

	<p><b>Mineral-fibre board in accordance with EN 14303</b></p> <p><b>“Hochtemperaturplatte HTB 680“</b></p> <p>Reaction to fire performance class in accordance with EN 13501-1: class A1 Dimensions 1,000 x 600 x 50 mm</p> <p>It is allowed to apply identical mineral-fibre boards if they match the following criteria: Nominal bulk density <math>\geq 120 \text{ kg / m}^3</math> Building material class A1 in accordance with EN 13501-1 Melting point <math>\geq 1.000^\circ\text{C}</math>. Thickness <math>\geq 50 \text{ mm}</math></p>
--	--

	<p><b>Label</b></p> <p>1 label - product No.</p>
--	--

	<p><b>Recommended tools</b></p> <ul style="list-style-type: none"> <li>• Filling knife, brush, masking tape</li> <li>• Mineral-wool knife and saw</li> <li>• If required: plastic film, folding ladder</li> </ul>
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# PYRO-SAFE Fugenabdichtung joint sealing system

## Installation requirements and options

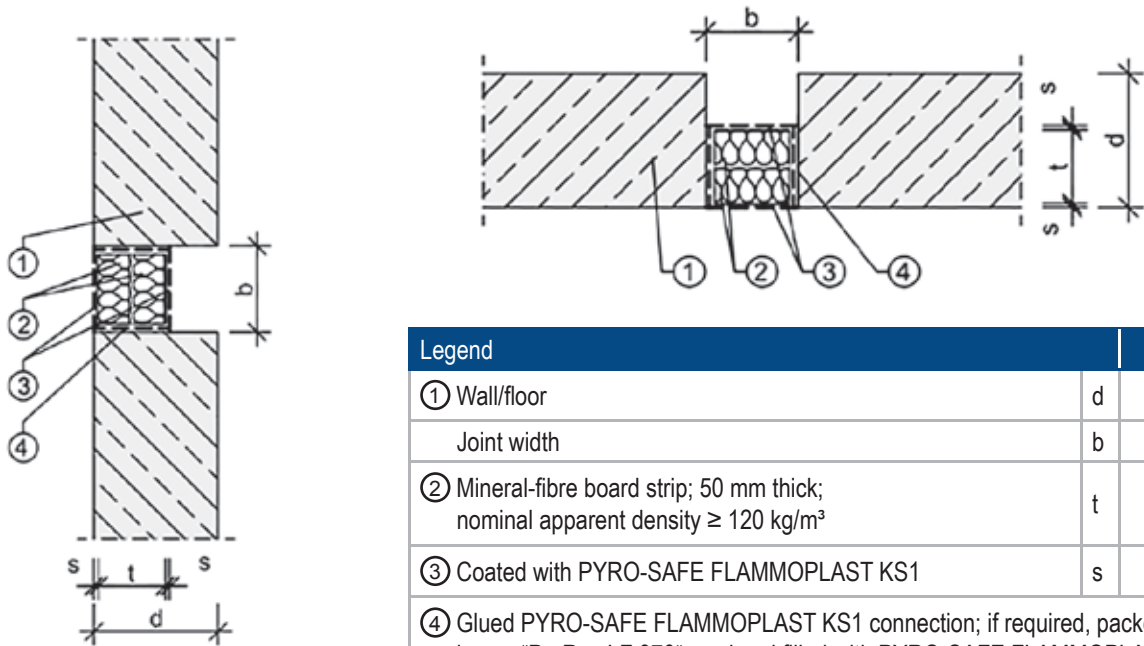
- It must be ensured before installing the joint sealing system that the type, thickness and fire resistance class of separating structural elements and the joint widths comply with ETA-13/0543 requirements.
- All foreign materials, such as loose parts of the structural elements, residues of expanding foam, dirt and other loose materials, must be completely removed from the joints.
- The width of the joints that have to be closed must be measured.
- One side of the mineral-fibre boards must be coated with "PYRO-SAFE FLAMMOPLAST KS1".
- Strips of a size that is required for the measured joint width must be cut from the coated mineral-fibre boards.
- "PYRO-SAFE FLAMMOPLAST KS 1" must be applied to the inside surface of the joints in the region of the mineral-fibre boards, so a covering coat is produced.
- The cut edges of the mineral-fibre board strips must be coated with "PYRO-SAFE FLAMMOPLAST KS1" and placed into the joint with two adjacent layers, so the pre-coated sides of the mineral-fibre board strips always face the inside surface of the opening in the structural element, and the joint is completely and tightly closed for a thickness  $\geq 100$  mm.
- Any remaining gaps between the mineral-fibre board strips and the inside surface of the opening must be tightly packed with mineral wool and then filled with "PYRO-SAFE FLAMMOPLAST KS3" joint filler.
- The entire surface of the mineral-fibre board strips must be coated on both sides of the joint with "PYRO-SAFE FLAMMOPLAST KS1", so the dry coat thickness will be  $\geq 1.0$  mm.



# PYRO-SAFE Fugenabdichtung joint sealing system

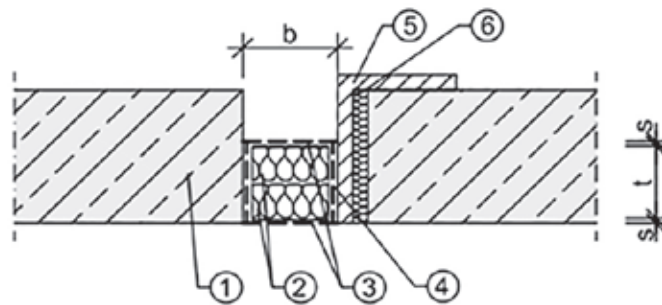
## Joint structure and dimensions

### Installation in walls and floors



Legend		[mm]
① Wall/floor	d	≥ 180
Joint width	b	20 - 100
② Mineral-fibre board strip; 50 mm thick; nominal apparent density ≥ 120 kg/m <sup>3</sup>	t	100
③ Coated with PYRO-SAFE FLAMMOPLAST KS1	s	≥ 1.0
④ Glued PYRO-SAFE FLAMMOPLAST KS1 connection; if required, packed with loose "ProRox LF 970" wool and filled with PYRO-SAFE FLAMMOPLAST KS3 filler		

### Installation in floors - inside surface protected with ≥ 10 mm thick steel angle frame



Legend		[mm]
① Floor	d	≥ 180
Joint width	b	20 - 100
② Mineral-fibre board strip; 50 mm thick; nominal apparent density ≥ 120 kg/m <sup>3</sup>	t	100
③ Coated with PYRO-SAFE FLAMMOPLAST KS1	s	≥ 1.0
④ Glued PYRO-SAFE FLAMMOPLAST KS1 connection; if required, packed with loose "ProRox LF 970" wool and filled with PYRO-SAFE FLAMMOPLAST KS3 filler		
⑤ Steel angle frame, t ≥ 10 mm		
⑥ Strips of 100-mm thick mineral-fibre board material; apparent density ≥ 35 kg/m <sup>3</sup>		

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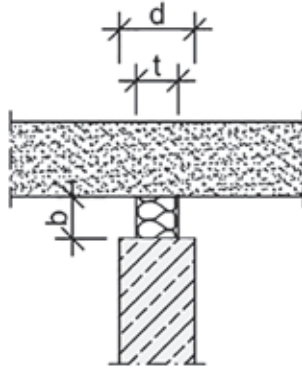


# PYRO-SAFE Fugenabdichtung joint sealing system

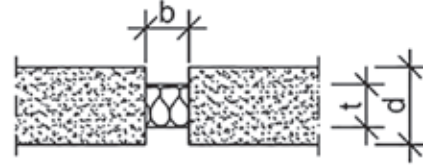
## Installation situations and fire-resistant design

The position of the joint sealing system in the joint is variable.

### Installation A: horizontal joint in/between floors, or walls and floors



	[mm]
d	≥ 180
b	20 - 100
t	100

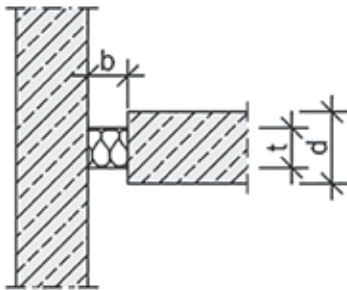


#### EI 120 – H – X – B – W 20 bis 100

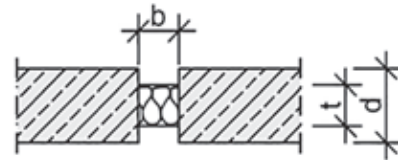
Orientation	"H" - horizontal support structure
Movement capability	"X" - no movement
Type of abutment joint	"B" - both prefabricated and prepared on site
Joint widths	"W" [mm]

Legend	
	Joint sealing
	Wall
	Floor

### Installation B: vertical joint in/between walls



	[mm]
d	≥ 180
b	20 - 100

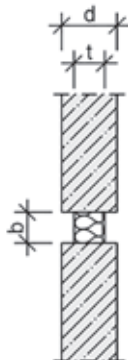


#### EI 120 – V – X – B – W 20 bis 100

Orientation	"V" - vertical support structure - vertical joint
Movement capability	"X" - no movement
Type of abutment joint	"B" - both prefabricated and prepared on site
Joint widths	"W" [mm]

Legend	
	Joint sealing
	Wall

### Installation C: horizontal joint in/between walls



	[mm]
d	≥ 180
b	20 - 100

#### EI 120 – T – X – B – W 20 bis 100

Orientation	"T" - vertical support structure - horizontal joint
Movement capability	"X" - no movement
Type of abutment joint	"B" - both prefabricated and prepared on site
Joint widths	"W" [mm]

Legend	
	Joint sealing
	Wall

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# PYRO-SAFE Fugenabdichtung joint sealing system

1. Clean the joint and cover the member surface to both sides of the joint with masking tape.



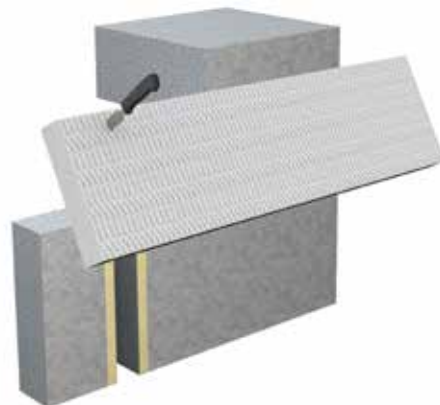
2. Measure the joint.



3. Coat one side of the mineral-fibre board with PYRO-SAFE FLAMMOPLAST KS 1.



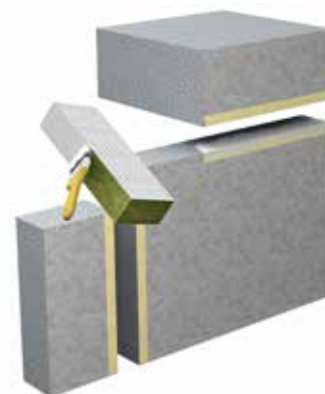
4. Cut the coated mineral-fibre board to a size that is required for the measured joint dimensions.



5. Apply PYRO-SAFE FLAMMOPLAST KS 1 to the inside surface of the joint in the region of the mineral-fibre boards, so a covering coat is produced.



6. Coat the cut edges of the mineral-fibre board strips with PYRO-SAFE FLAMMOPLAST KS 1.



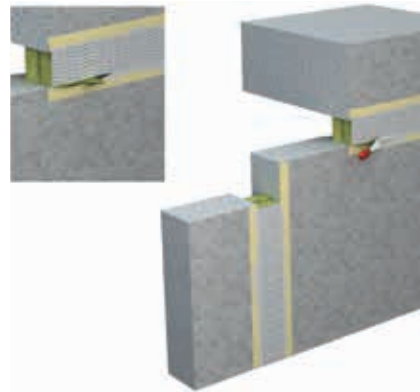
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# PYRO-SAFE Fugenabdichtung joint sealing system

7. Close the joints in the structural element with two adjacent layers of mineral-fibre board strips.



8. Use loose mineral wool to fill any joint roughness; apply PS FLAMMOPLAST KS 3 joint filler to produce a smooth surface.



9. Coat the entire surface of the mineral-fibre board strips with PYRO-SAFE FLAMMOPLAST KS 1 (dry coat thickness  $\geq 1.0$  mm).



10. Label partition (recommended and/or if requested by local authorities). Fill out partition sign clearly and attach permanently next to/above (not on!) the partition.



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**Declaration of Performance**  
**N° DoP-01151-PYRO-SAFE-Fugenabdichtung**  
**PYRO-SAFE Fugenabdichtung**

Date: 27.01.2014  
 Rev. 01  
 Page 1 of 1

*Unique identification code of the product-type*  
**Linear Joint and Gap Seals**

*Type, batch or serial number or any other element allowing identification of the construction product*  
 Joint filling system **PYRO-SAFE Fugenabdichtung** mainly consists of mineral fibre boards,  
 intumescent coating **PYRO-SAFE FLAMMOPLAST KS 1**  
 and intumescent filler **PYRO-SAFE FLAMMOPLAST KS 3**  
 see batch number on packaging/delivery note

*Intended use*

The joint filling system „PYRO-SAFE Fugenabdichtung“ is used for sealing horizontal and vertical linear joints (structural joints such as linear butt joints) and is intended to maintain or reinstate the fire resistance performance of separating building elements where they are interrupted or separated by joints.

*Manufacturer*

**svt Brandschutz Vertriebsgesellschaft mbH International**  
**Gluesinger Strasse 86**  
**D - 21217 Seevetal**

*System or systems of assessment and verification of constancy of performance*  
**Systems 1 and 3**

*The Notified body*

**Materialprüfanstalt für das Bauwesen Braunschweig, identification number 0761**

*performed the initial test of the products (systems 1 and 3) as well as the initial inspection of the manufacturing plant and of factory production control (system 1) and the continuous surveillance, assessment and evaluation of factory production control according to system 1.*

*The*

**Certificate of Conformity N° 0761-CPD-0351**

*issued, confirms that all requirements of factory production control are satisfied stipulated in the European Technical Approval/Assessment*

**ETA 13/0543**

*Declared performance*

Essential Characteristics	Performance	Harmonised technical Spezifikation
Reaction to fire	Classification according to appendix 1 of ETA 13/0543	EN 13501-1
PYRO-SAFE FLAMMOPLAST KS 1	class E	
PYRO-SAFE FLAMMOPLAST KS 3		
Fire resistance	Depending on type of installation and building element maximum class EI 120-H-X-B-20 to 100, EI 120-V-X-B-20 to 100 or EI 120-T-X-B-20 to 100 see ETA 13/0543	EN 13501-2
Emission of dangerous substances	no dangerous substances acc. to TR 034	ETAG 026-3
Durability and serviceability	Use category type Z <sub>1</sub>	

The performance of the product for which the declaration of performance is issued, is in conformity with the declared performance. This declaration of performance is issued under the sole responsibility of the named and identified manufacturer.

Signed for and on behalf of the manufacturer by:

i.V. Christian Meyer-Korte  
 Product and sales manager  
 industry & OEM

i.V. Andree Schober  
 Head of  
 chemical department