

***protect your values***

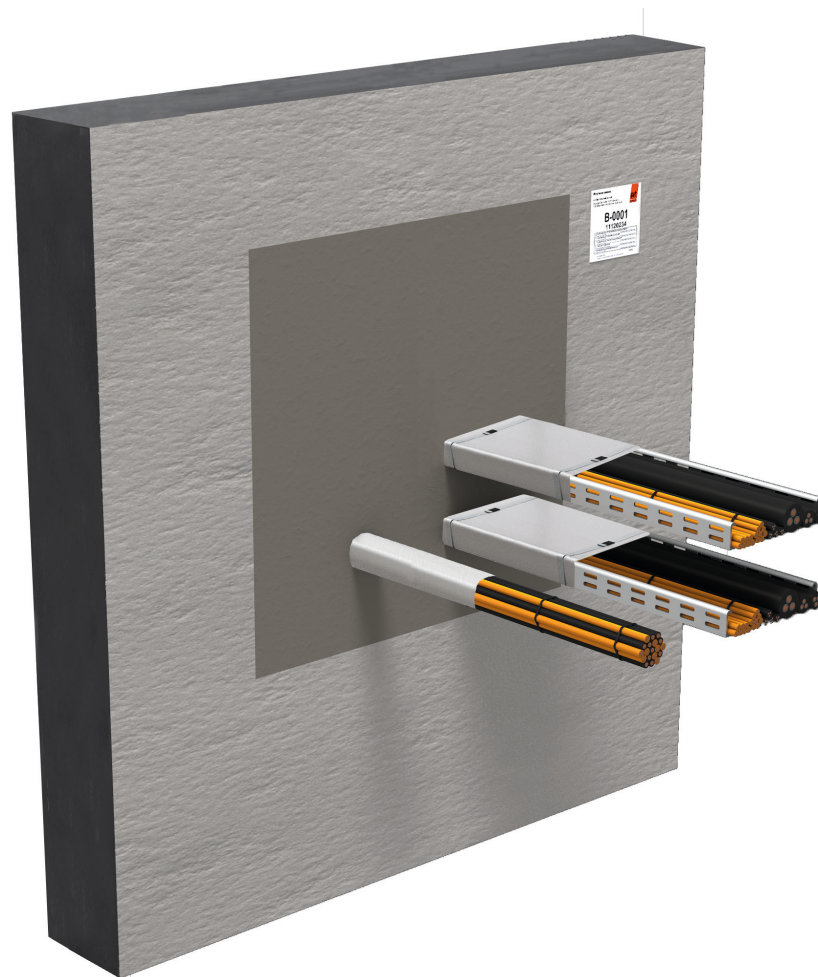


# **PYRO-SAFE Novasit BM**

## **Cable sealing EI 240**

### **Installation instructions**

**Fibre-free fire stop system made of special mortar for electrical cables.  
Fire resistance class EI 240 compliant with EN 13501-2 in accordance with ETA-16/0132 and  
classification reports no.: 02163/11/Z00NP and 01858.1/12/Z00NP**



Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).  
On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal  
PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.

# PYRO-SAFE Novasit BM

## Table of contents

	Topic	Page
<b>1.</b>	<b>Preliminary remarks/ Overview</b>	<b>3 - 6</b>
1.1	Target group; Use of the instructions; safety informations	3
1.2	Scope, structural elements	4
1.3	Fire resistance classes for floor and wall partition	5
1.4	Field of application (Dimensions)	6
<b>2.</b>	<b>Allowed services</b>	<b>7</b>
2.1	Cables, cable bundles, cable supports	7
<b>3.</b>	<b>Spacing requirements</b>	<b>8</b>
<b>4.</b>	<b>Used products</b>	<b>9</b>
<b>5.</b>	<b>Regulations and variants / Rules over the first cable/pipe support</b>	<b>10</b>
<b>6.</b>	<b>Fire protection measures</b>	<b>11</b>
<b>8.</b>	<b>Installation steps</b>	<b>13 - 15</b>
	<b>Declaration of Performance</b>	<b>16</b>

## PYRO-SAFE Novasit BM

### 1. Preliminary remarks / Overview

#### 1.1 Target group

- The installation instructions are intended solely for personnel trained in fire protection.

#### 1.1 Use of the instructions

- Read through these installation in their entirety before beginning work. Pay particular attention to the following safety instructions.
- The authorisation holder assumes no liability for damage caused by failure to comply with these instructions.
- Figures appear as examples only. Your installation results may differ in appearance.

#### 1.1 Safety instructions



Refer to the safety data sheets when processing the fire protection compound PYRO-SAFE NOVASIT BM

##### Personal protective equipment:



Breathing protection – Dust mask

If the exposure limit values are exceeded (e.g. can happen when mixing), use particle-filtering half mask FFP 1 (white).



Hand protection – Protective gloves

Wear waterproof, abrasion- and alkali-resistant nitrile gloves.



Eye protection – Wear safety goggles.



Body protection – Wear protective clothing.



Safety instructions for the installation of floor penetration seals:

- The area underneath the floor penetration seal must be cordoned off against entry (warning cordoning tape and sign) during the mortaring and during the curing time (28 days): Warning against possible falling objects, do not enter area, mortaring work in floor component openings!
- The contractor for the manufacture of floor penetration seals must inform the client in writing (for sending to the constructors or duly appointed representative) that, after the manufacture of the fire penetration seals in floors, they must be secured on site against loading by suitable measures (e.g. by a safety fence or by covering by means of a grating), in particular against being entered.

## PYRO-SAFE Novasit BM

### 1.2 Scope

The PYRO-SAFE Novasit BM mixed penetration sealing system with mortar in wall and floor openings with PYRO-SAFE NOVASIT BM belong to the “mortar” product type in accordance with ETAG 026-2 and is assessed and evaluated accordingly. The fire protection mortar PYRO-SAFE NOVASIT BM is classified as a product for use in penetration seals in accordance with ETA-16/0132.

#### Reaction to fire

PYRO-SAFE NOVASIT BM is classified as A1 in accordance with EN 13501-1.

#### Fire resistance

PYRO-SAFE Novasit BM complies with requirements of class EI 240 for cables in accordance with EN 13501-2.

When installed in walls or floors with a lower fire resistance duration, the fire resistance duration of the penetration seal is also reduced to that of the fire resistance class of the wall or floor.

#### Release of dangerous substances

None

#### Durability and serviceability

The fire protection mortar „PYRO-SAFE NOVASIT BM“ fulfils the type  $Z_2$  in accordance with EOTA TR 024.

PYRO-SAFE Novasit BM can be subjected to the conditions of inside rooms with and without exposure to moisture, without substantial changes to the fire protection characteristics being expected.

## 1.2 Structural elements

#### Solid walls

made of masonry, concrete, reinforced concrete, porous concrete, ceramic bricks, hollow bricks or air bricks with a density  $\geq 600 \text{ kg/m}^3$ .  
The walls must be correspondingly rated for the required fire resistance class in accordance with EN 13501-2.

#### Solid floors

made of concrete, reinforced concrete with a density of  $\geq 1700 \text{ kg/m}^3$ .  
The walls must be correspondingly rated for the required fire resistance class in accordance with EN 13501-2.

# PYRO-SAFE Novasit BM

## 1.3 Fire resistance classes for wall and floor partition

Fire resistance classes					
	Measures	Wall		Floor	
		Fire resistance class	Source*	Fire resistance class	Source*
<b>Cables, cable bundles and cable trays with fire protection wrap „PYRO-SAFE DG-CR 1.5“ – Wrap width = 500 mm</b>					
Cables $\varnothing \leq 80$ mm	2 x 2 layers	EI 240	1	EI 240	2
Cable bundles $\varnothing \leq 100$ mm with cables $\leq 21$ mm	2 x 2 layers	EI 240	1	EI 240	2

\*Classification report no.:

1 → 02163/11/Z00NP,

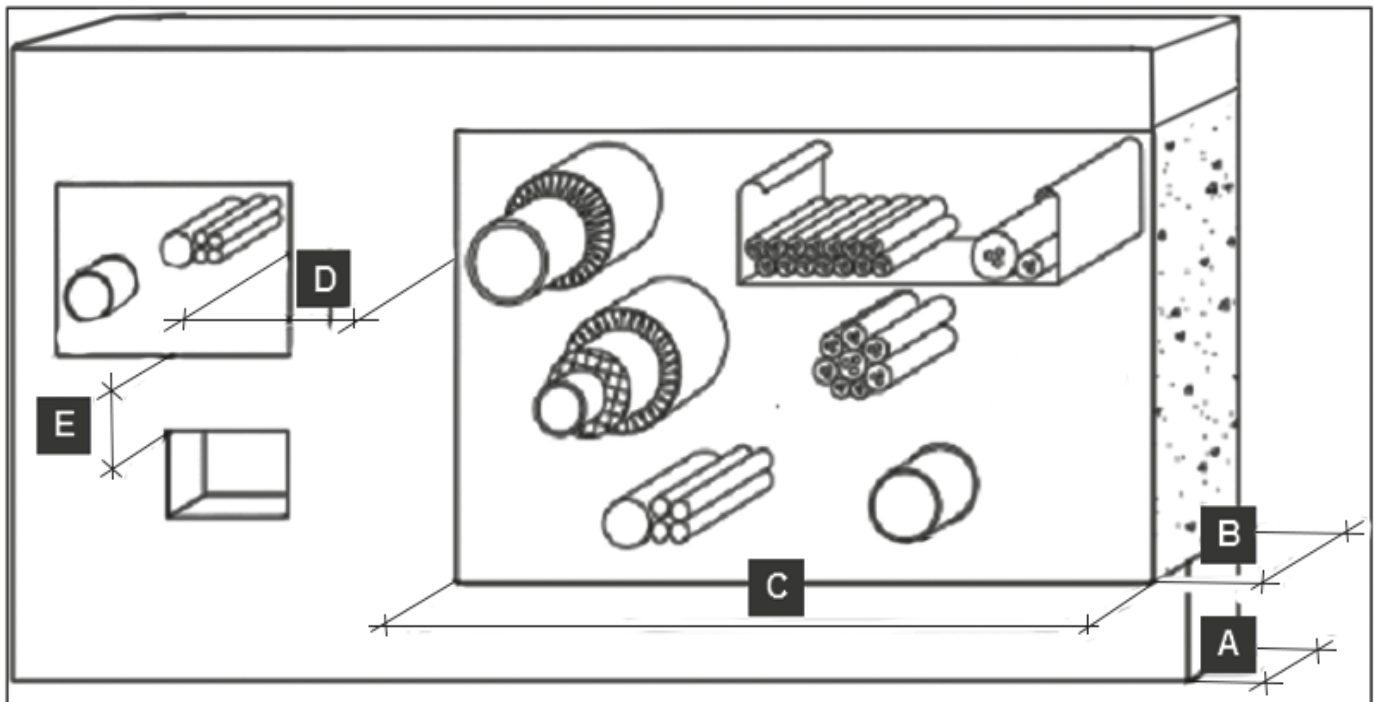
2 → KB 01858.1/12/Z00NP

Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).  
 On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal  
 PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.

# PYRO-SAFE Novasit BM

## 1.4 Field of application (Dimensions)

Dimensions			
Pos.	Legend	Wall [mm]	Floor [mm]
<b>A</b>	Thickness of structural element	≥ 240	≥ 200
<b>B</b>	Thickness of penetration seal	≥ 240	≥ 240
<b>C</b>	Maximum dimensions of the opening (width x height)	600 x 600	600 x 600
<b>D</b>	Distance to other cable- oder pipe penetration seals one or both openings > 400 mm x 400 mm	≥ 200	≥ 200
	both openings ≤ 400 mm x 400 mm	≥ 100	≥ 100
<b>E</b>	Distance to other openings or installations one or both openings > 200 mm x 200 mm	≥ 200	≥ 200
	both openings ≤ 200 mm x 200 mm	≥ 100	≥ 100






Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).  
 On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal.  
 PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.

Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).

# PYRO-SAFE Novasit BM

## 2. Allowed services

### 2.1 Cables / cable bundles / cable supports

	<p><b>Electrical cables and lines of all types (including optical fibre cables)</b> overall cross-section of individual cables up to <math>\varnothing \leq 80</math> mm</p>
	<p><b>Cable bundles</b> up to <math>\varnothing \leq 100</math> mm with cables up to <math>\varnothing \leq 21</math> mm. No filling needed for tightly compressed and tied bundles.</p>
	<p><b>Cable trays</b> Cable ducts and ladders made of steel, with organic coating if applicable, as long as the fire reaction class complies at least with class A2 according to EN 13501-1.</p>

Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).  
On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal  
PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.

### 3. Spacing requirements

Spacing requirements – walls						
				Seal edge		
				Upper	Under	Side
 Cables	≥ 10 (next to each other) ≥ 40 (above each other)			≥ 30	≥ 20	
 Cable bundles						
 Cable trays						
Spacing requirements – floors						
				Seal edge		
				Front	Back	Side
 Cables	≥ 10 (next to each other) ≥ 40 (above each other)			≥ 30	≥ 20	
 Cable bundles						
 Cable trays						


Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).  
 On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal.  
 PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.


Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).




# PYRO-SAFE Novasit BM


## 4. Used products

	<p><b>PYRO-SAFE NOVASIT BM</b> <b>Fire protection mortar</b></p> <p>in accordance with ETA-16/0132</p> <p>20 kg bag – <b>product No. 01161000</b></p>
---	---

	<p><b>PYRO-SAFE NOVASIT BM</b> <b>Fire protection mortar</b></p> <p>in accordance with ETA-16/0132</p> <p>10 kg pail – <b>product No. 01161010</b></p>
---	--

	<p><b>PYRO-SAFE DG-CR 1.5</b> <b>Fire protection wrap</b></p> <p>in accordance with ETA-16/0268</p> <p><b>product No. 01261000</b></p>
--	--

	<p><b>Label</b></p> <p>1 piece – <b>product No. 01229000</b></p>
---	--

	<p><b>Recommended tools</b></p> <ul style="list-style-type: none"><li>• Mixing container – mortar cask</li><li>• Mixing paddle</li><li>• Masonry tools (round dippers)</li><li>• Wire binding pliers, size 10 key or ratchet</li></ul>
---	--

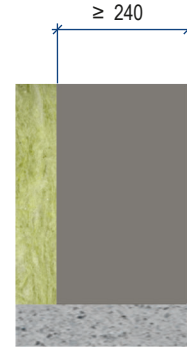
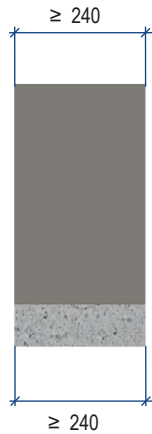
Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).  
On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal.  
PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.

# PYRO-SAFE Novasit BM

## 5. Regulations and variants

- The combination penetration seal may be used for closing openings without installations (so-called reserve penetration seal).
- Penetration seal in floors shall be protected on site by client with suitable barriers or covered with grating, in order to prevent them from being load or walked on.
- During installation in walls, one side can be boxed in if necessary and, for floor penetration seals, the underside can be boxed in.
- **For installation in floors, sealing surfaces larger than 500 mm x 500 mm without penetration of cables and cable trays must be carried out with a professional friction-locked steel reinforcement!**

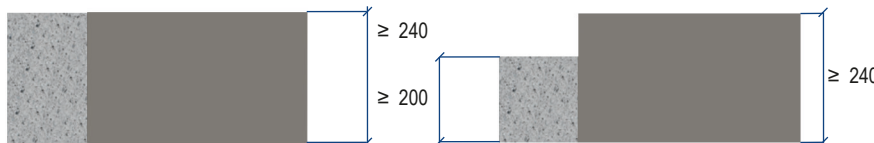
### Variants in solid walls



PYRO-SAFE NOVASIT BM fire protection mortar  
Lost formwork e.g. made of mineral fibre mat (non-flammable, melting point > 1000 °C)

Dimension specifications in mm

### Variants in solid floors



PYRO-SAFE NOVASIT BM fire protection mortar  
Lost formwork e.g. made of mineral fibre mat (non-flammable, melting point > 1000 °C)

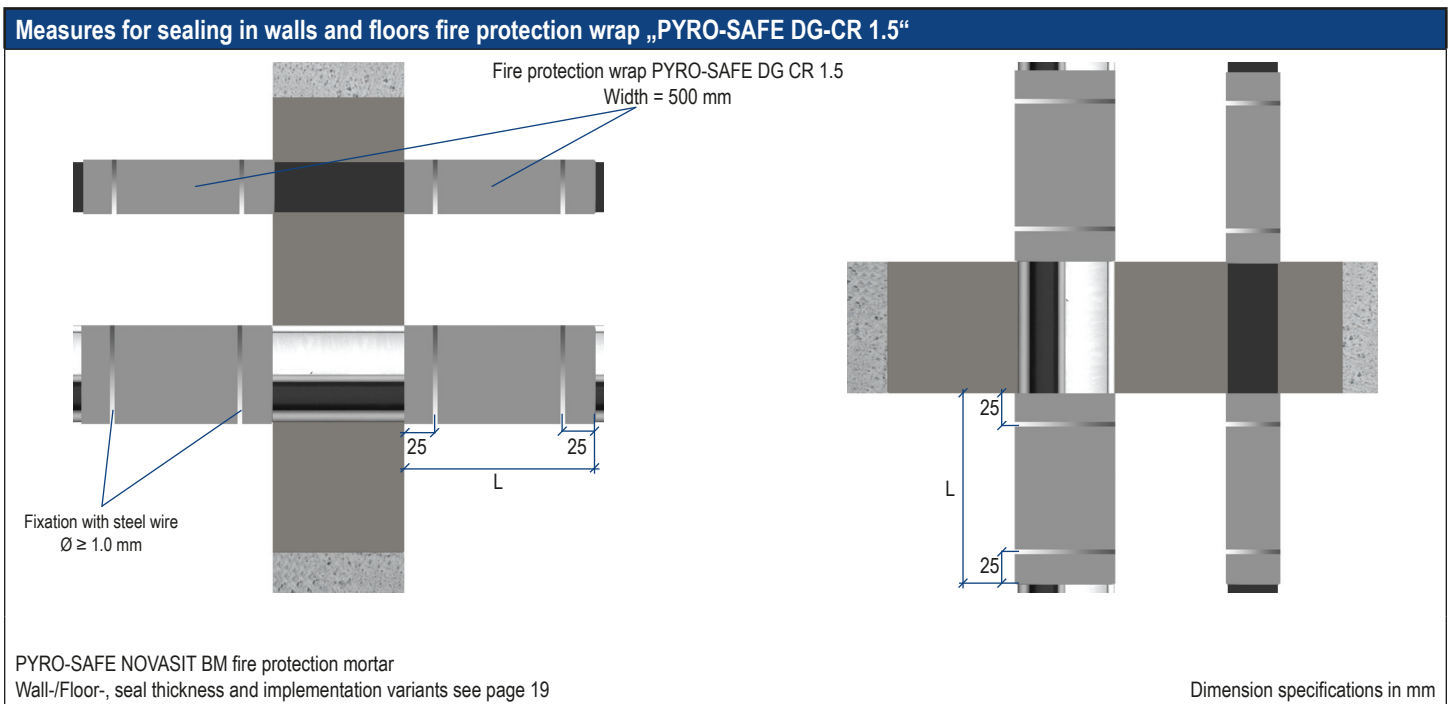
Dimension specifications in mm

# PYRO-SAFE Novasit BM

## 6. Fire protection measures

### 6.1 Cables / cable bundles / cable support structures

- The feed-through of cables or cables bundles is permitted without and with cable trays.
- Cable bundles can be guided unopened through the penetration sealing. If they consist of parallel-running cables that are densely packed and permanently bound, stitched or welded together they don't have to be filled inside with filler material.
- The support structures of the cable trays must be formed in such a way that, in case of fire, no additional mechanical loading of the penetration sealing can occur.
- The PYRO-SAFE DG-CR 1.5 fire protection wrap is coated and covered with a protective film on one side. Before installation the protective film shall be removed, the coated side have to be inside. Fixation of the wrap with steel wires.



Wall / Floor	Dimensions [mm]	Fire protection wrap PYRO-SAFE DG-CR 1.5							Fire protection class	
		Wrap width L [mm]	Qty. wraps [n]	Qty. layer [n]	Overlapping [mm]	Inside seal [mm]	Outside seal [mm]	Wall	Floor	
Cables	Ø ≤ 80	500	2	2	45 - 60	0	500	EI 240	EI 240	
Cable bundles	Ø ≤ 100	500	2	2	0	0	500	EI 240	EI 240	

# PYRO-SAFE Novasit BM

## 8. General installation steps

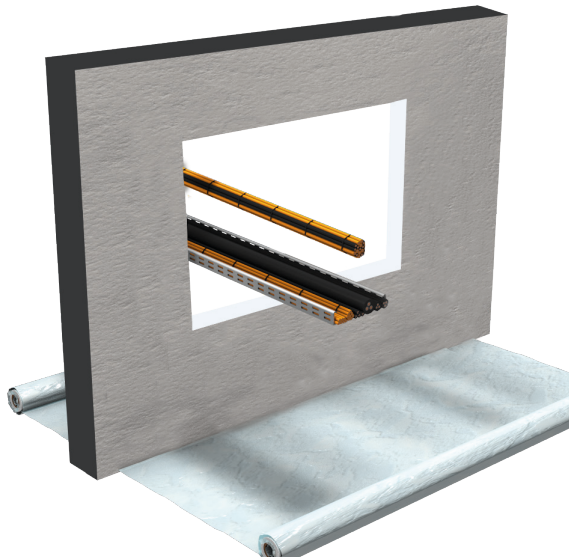
1. Mix a PYRO-SAFE NOVASIT BM 20 kg sack of fireproofing compound with approx. 6 litres of water. Pour water into a mixing container, add mortar. Follow the safety instructions on p. 3.



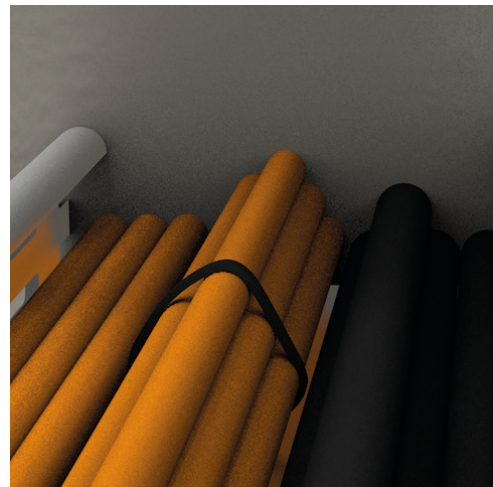
2. Stir to mix in thoroughly. After approx. 4-5 minutes soaking period, mix up again thoroughly.



3. If necessary, cover the floor on both sides with film, clean the recess, wet absorbing surfaces of the recess with water.



6. Apply the partition compound so that there is a solid, tight connection to the component. Completely fill intermediate spaces and bandage cavities.

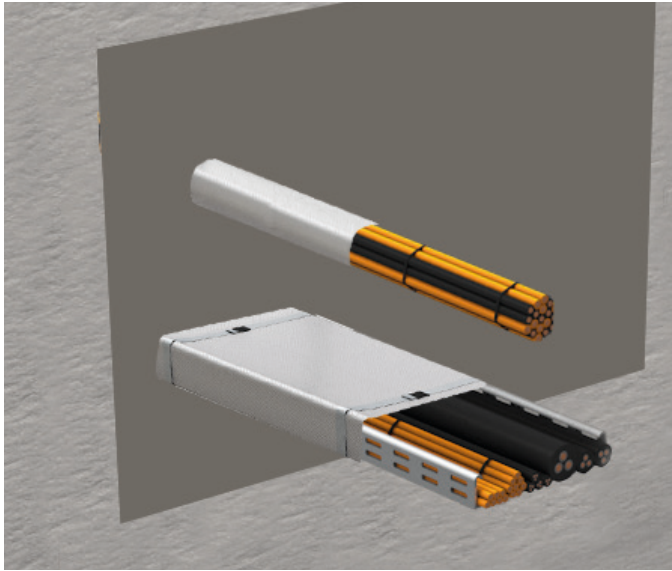


Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018). On request, we would be happy to inform you about the legal and technical framework or the manufacturer's specifications applicable in your individual case. © Copyright svt Group, Seevetal. PYRO-SAFE is a registered trademark © of the svt Group, Seevetal.

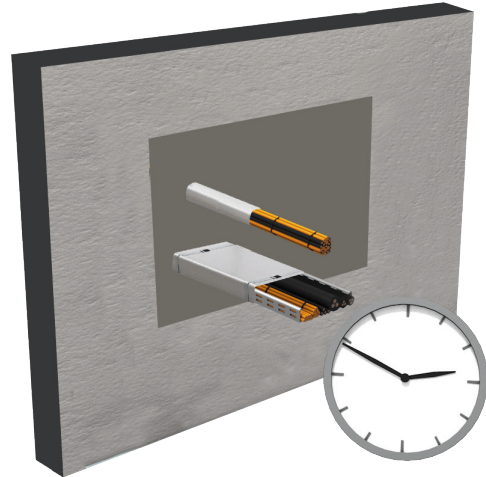
Subject to errors, misprints and modifications. All information corresponds to state-of-the-art technology and the version of standards applicable at the time of printing (02/2018).

**8. General installation steps**

7. Cable / cable bundles / cable supports accordingly to p. 11 with fire protection wrap PYRO-SAFE DG-CR 1.5 on both sides, length 500 mm and fixation with steel wire.



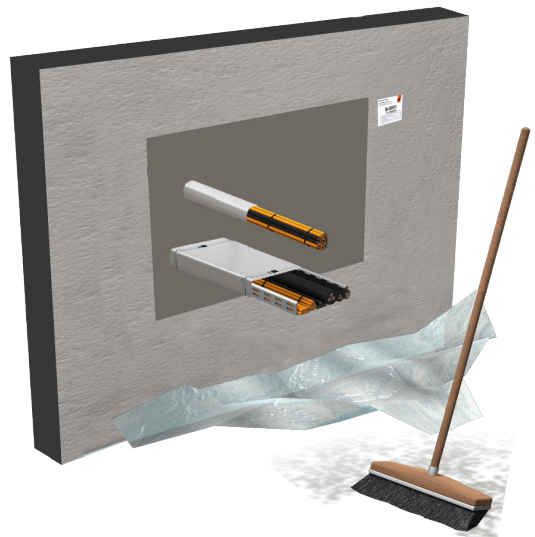
8. After appropriate hardening, smooth the surfaces with the trowel and fully rework any shrinkage cracks. The same applies to the areas after removing the formwork.



9. If required or mandatory, fill the identification label and apply on the side or below (not on!) the installation.



10. After the mortar residues dry, remove them from cables, walls and floors, clean surfaces including the removal of the cover films and dispose of properly.



**Declaration of Performance**  
 Nr. 01161000-NOVASIT-BM  
**PYRO-SAFE NOVASIT BM**

Date: 30.01.2017  
 Rev. 03  
 Page 1 of 1

*Unique identification code of the product type*  
**PYRO-SAFE NOVASIT BM**

*Intended use:*  
**Product for use in penetration seals**

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

*System for assessing and verifying constancy of performance*  
**System 1**

*European Assessment Document*  
**ETAG 026-2:2008-01-01**

<i>Harmonised technical Specification/ European Technical Assessment</i>	<i>EC certificate of conformity</i>
EN 998-2: 2010	0764-CPD-0190
<b>ETA-16/0132 dated 16.01.2017</b>	<b>0761-CPR-0582</b>

*Technical Assessment Body*  
**Deutsches Institut für Bautechnik (DIBt), Berlin**

*The notified body*  
**Materialprüfanstalt für das Bauwesen Braunschweig, code number 0761**

*Declared performance*

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	class A1	EN 13501-1
Pressure resistance	M 2,5	EN 998-2:2010
Gross density (dry mortar)	900 kg/m <sup>3</sup>	
Starting shear strength (Adhesive shear strength)	0,15 N/mm <sup>2</sup> (table value)	
Water absorption	NPD	
Chloride content	≤ 0,10 M.-%	
Water vapor permeability μ	5/20 (table value)	
Thermal conductivity λ <sub>10,dry</sub>	≤ 0,25 W/(mK) for P=50% ≤ 0,27 W/(mK) for P=90% (table values acc. EN 1745)	
Emission of dangerous substances	no dangerous substances	ETAG 026-2
Durability and serviceability	Use category type Z <sub>2</sub>	EOTA TR 024
Fire resistance	Depending on the type of installation, the type of building element and the penetrating services – see ETA-16/0132	EN 13501-2

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No. 305/2011, under the sole responsibility of the manufacturer identified above  
 DoP online available at [www.svt.de](http://www.svt.de).  
 Signed for and on behalf of the manufacturer by:



i.V. Christian Meyer-Korte  
 Head of Product Management



i.V. Andree Schober  
 Head of chemical department