



## Innovative Fire-Protection Systems

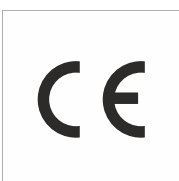




ZAPP-ZIMMERMANN GmbH is a company certified in accordance with DIN ISO 9001. Successful annual surveillance audits, conducted by TÜV Rheinland, demonstrate the high priority placed on quality management in our company and our ongoing commitment to the highest quality.



Moreover, all of our tested and certified products are subject to regular external monitoring by the materials testing institutes, MPA Stuttgart and MPA Braunschweig. Independent employees of the materials testing institute inspect the self-monitoring data and take product samples that are tested in the laboratory of the materials testing institute. Thus, you can be sure that all of our products always satisfy all specifications of the general technical approvals and test certificates.



All of our European approved products have a CE mark and a certificate of conformity issued by MPA Braunschweig. Thus the fact that the products of have been subjected to initial inspection, and are subjected to factory production control is verified and confirmed. This external quality control takes place yearly.



## National approvals

In Germany, for more than 20 years the company, ZAPP-ZIMMERMANN, has been using fire-protection systems that are approved by the Deutsches Institut für Bautechnik (DIBt). After successful testing the test report is submitted to the DIBt, thereafter a “technical approval” (AbZ) is received for the tested system. We have additional approvals for our fire-protection systems for Switzerland (VKF), The Netherlands (Efectis) and Great Britain (Warrington Fire).



## European Technical Approvals

The European Organisation for Technical Approvals (EOTA) was founded in the course of European harmonization, this organisation works out the fundamentals for granting European Technical Approvals (ETA). All European approval authorities are represented in the EOTA (OIB, DiBT, etc.). After successful testing, which can be executed at the recognised test centre, the approval authorities issue a European Technical Approval for the tested system. Through the introduction of the ETAs, fire-protection systems can be used throughout Europe. Each Member State is free to specify its level of safety in the construction sector, as well as the requisite classes and supplemental requirements for construction products.

ZAPP-ZIMMERMANN has multiple fire-protection systems with a European Technical Approval. Additional fire-protection systems have been tested and the approvals have been applied for.

■ Penetration seal systems

■ joint sealing

## System ZZ-Fire protection foam 2K NE ETA-11/0206

*Fire resistance class EI 90/EI 120 for solid walls, solid ceilings and lightweight partition walls*

### New innovative fire safety foam system

In addition to its outstanding technical fire safety properties, the new System ZZ-Fire protection foam 2K NE is particularly characterised by its easy processing. It can be used as a mixed penetration seal (EI 90), as well as a pure cable penetration seal (EI 90/EI 120).

The optimal coordination of the beginning of the reaction and hardening enables sufficiently long work interruptions for the user, as well as fast work progress.

Thanks to the high viscosity, the user does not have to deal with foam running out of the penetration seal. After hardening, the permanently elastic structure of the penetration seal enables easy reconfiguration.



#### Easy reconfiguration

As is the case with all products from ZAPP-ZIMMERMANN, after hardening, the permanently elastic structure of the penetration seal enables multiple reconfigurations and thus significantly contributes to the profitability of the systems.



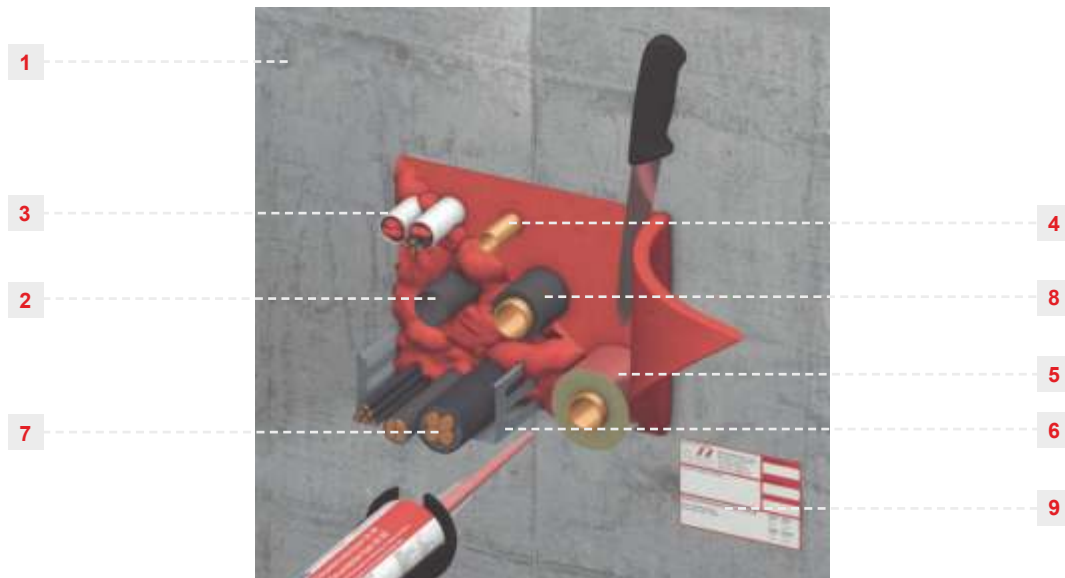
#### Single-product solution

To achieve EI90, other than ZZ-Fire protection foam 2K NE, no additional material components or work steps are necessary to produce a permanent and reliable fire safety penetration seal.



#### Fast and clean work

Through use of the new cordless DynamicMax 380 ml cartridge gun, multiple cartridges can be quickly and conveniently processed in succession. The casing tape is outstandingly suited as a casing aid for ZZ-Fire protection foam 2K NE (two-component penetration seal foam). The high-quality adhesive tape can be torn off by hand and consists of PP with a watertight coated fabric.



**Component**

- 1** Fire resistance: to EI 120  
**Max. dimensions:** 450 x 450 mm  
**Min. penetration seal thickness:** 200 mm  
**Implementation areas:** solid walls and ceilings, lightweight partition walls







**Approved installations**

- 2** Flammable pipes of PVC and PE up to 50 mm (**without additional sleeve**)
- 3** Conduit to a diameter of 40 mm
- 4** Nonflammable pipes of copper, steel, stainless steel and cast iron to 88.9 mm
- 5** Insulation of mineral wool
- 6** Cable trays may be routed through and rest on the component soffit, and / or can rest on the side.
- 7** Cable (plastic-sheathed lines, telecommunication cable, fibre-optic cable) with a diameter to 80 mm
- 8** Insulation of AF/Armaflex can be routed through.
- 9** Identification plate

**System components**

	Designation	Art. no.	PU
	<b>1. ZZ-Fire protection foam 2K NE, 6 pc. set</b> <i>incl. 12 mixer attachments, 6 pairs of gloves, 1 casing tape</i>	B15N01-0106	1
	<b>2. ZZ-Wrap NE L 5,000 mm, W 150 mm, H 3 mm (only for EI120)</b>	B04N00-0004	1
	<b>3. Identification plate for System ZZ-Fire protection foam 2K NE</b> <i>Please refer to the „National additional requirements.“</i>	B16H00-0048	1

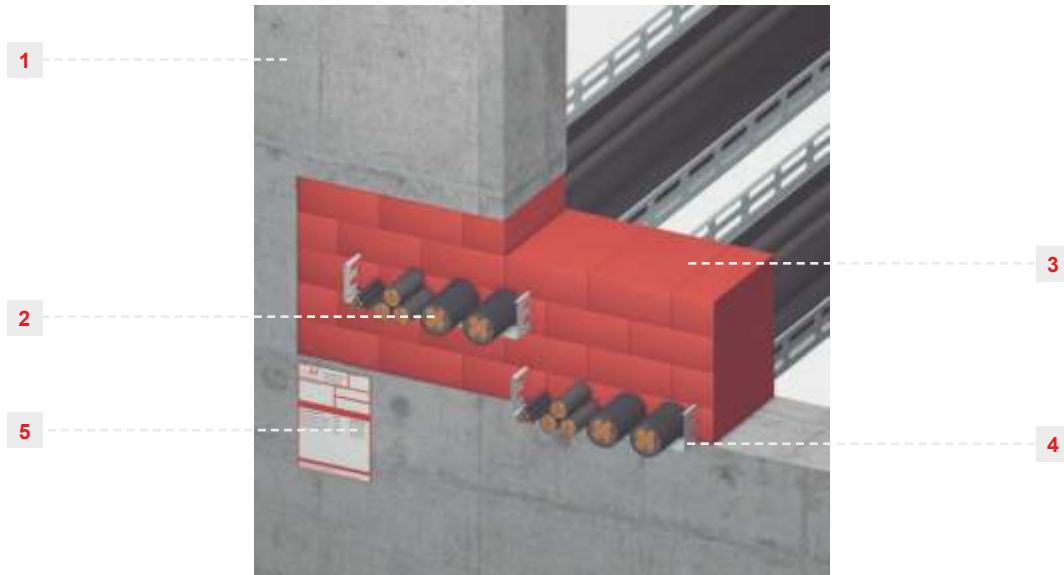
**Accessories**

	Designation	Art. no.	PU
	<b>4. Knife with serrated blade, wide</b>	B99H00-0047	1
	<b>5. Casing tape</b>	B99H00-0111	1
	<b>6. Cartridge gun HandyMax 380 ml (5:1)</b>	B16H00-0044	1
	<b>7. Cartridge gun DynamicMax 380 ml (5:1)</b>	B16H00-0045	1
	<b>8. Mixer attachment 380 ml, 12 pc. set</b>	B99H00-0112	1
	<b>9. Extension tube</b>	B99V00-0210	1

Penetration seal systems

**System ZZ-Fire protection block 200 NE ETA-10/0431**

Fire resistance class to EI 120. For solid walls, solid ceilings and lightweight partition walls.







**Component**

- 1** Fire resistance: to EI 120  
Max. dimensions in walls: 600 x 1,000 mm or 1,000 x 600 mm  
Max. dimensions in ceilings: 700 x 1,000 mm  
Min. penetration seal thickness: 200 mm  
Implementation areas: Solid walls and ceilings, lightweight partition walls
- 3** Dimensions ZZ foam block 200 NE: 144 x 60 x 200 mm (W x H x D)
- 4** Cable trays may be routed through and rest on the component soffit, and/or may rest on the side
- 5** Identification plate



**Approved installations**

- 2** Plastic-sheathed lines / telecommunications cable / optical cable to a maximum outer diameter of 80 mm, tied cable bundles to 100 mm, contained individual cables to maximum 21 mm, steel conduit to 15 mm with cable installed / without cable installed, electrical conduit of plastic to 20 mm with cable installed / without cable installed

**System components**

		Designation	Dimensions in mm:	Art. no.	PU
		1. ZZ-Foam block 200 NE	W 144 x H 60 x L 200	B01N00-0040	20
		2. ZZ-Foam block 200 NE vacuum-packed	W 144 x H 60 x L 200	B01N02-0012	10
		3. ZZ-Wrap NE	L 5,000 x W 150 x H 3	B04N00-0004	1
		4. ZZ-Mastic NE	Contents 310 ml	B15N00-0013	12

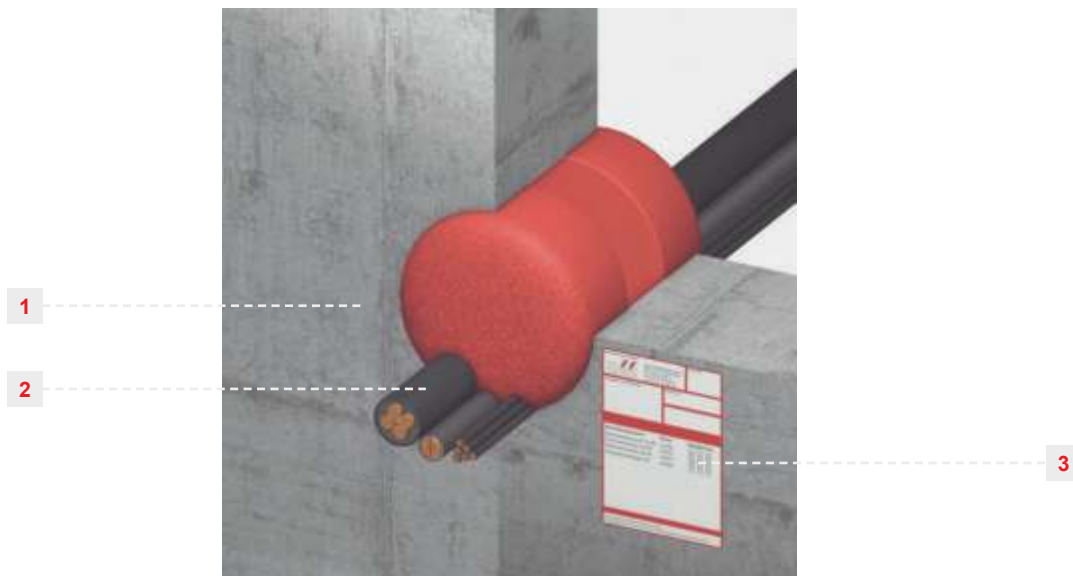
**Accessories**

	Designation	Art. no.	PU
	5. Knife with serrated blade, wide	B99H00-0047	1
	6. Professional cartridge gun 310 ml	B16H00-0024	1



## System ZZ-Fire protection plug NE ETA-12/0088

Fire resistance class to EI 120. For solid walls, solid ceilings and lightweight partition walls.



### Component

- 1** Fire resistance: to EI 120  
Max. dimensions: Ø 250 mm  
Min. penetration seal thickness: 170 mm  
Implementation areas: Solid walls and ceilings, lightweight partition walls

### Approved installations

- 2** Plastic-sheathed lines / telecommunications cable / optical cable to a maximum outer diameter of 80 mm, tied cable bundles to 100 mm, contained individual cables to maximum 21 mm, other lines to 24 mm. Steel conduit to 16 mm with cable installed / without cable installed, plastic conduit to 16 mm with cable installed / without cable installed
- 3** Identification plate

### System components



Designation	Dimensions in mm:	Art. no.	PU
1. ZZ-Plug NE		See variants	20
2. ZZ-Wrap NE	L 5000 x W 150 x H 3	B04N00-0004	1
3. ZZ-Mastic NE	Contents 310 ml	B15N00-0013	12

Variants	Max. opening size in [mm]	Art. no.	PU
1. ZZ-Plug NE 65 mm	65	B02N00-0067	20
1. ZZ-Plug NE 78 mm	78	B02N00-0068	20
1. ZZ-Plug NE 107 mm	107	B02N00-0069	20
1. ZZ-Plug NE 122 mm	122	B02N00-0070	20
1. ZZ-Plug NE 134 mm	134	B02N00-0071	20
1. ZZ-Plug NE 165 mm	165	B02N00-0072	20
1. ZZ-Plug NE 200 mm	200	B02N00-0073	20
1. ZZ-Plug NE 250 mm	240	B02N00-0074	10

### Accessories



Designation	Art. no.	PU
4. Knife with serrated blade, wide	B99H00-0047	1
5. Professional cartridge gun 310 ml	B16H00-0024	1

## System ZZ-Fire protection mastic NE



- z European tested in accordance with EN 1366-3:2009
- z For cable penetration seals with fire resistance class to EI 120
- z Max. dimensions: 100 mm x 100 mm / Ø 113 mm
- z Min. penetration seal thickness 100 mm / 150 mm

### Tested installations

- z Plastic-sheathed lines / telecommunication lines / optical fibre cable to Ø 21 mm

### Particularities

- z A soffit frame is not required in the lightweight partition wall
- z Fill depths: > 15 mm per side (EI 90)
- z Fill depth per side (EI 120) w > 50 mm, minimum penetration seal thickness and minimum partition thickness 150 mm

As an aid, a casing of cardboard or plastic, or a backfill of mineral wool can be used.

## System ZZ-Fire protection silicone NE



- z European tested in accordance with EN 1366-3:2009
- z For cable penetration seals with fire resistance class to EI 120
- z Max. dimensions: 100 mm x 100 mm / Ø 113 mm
- z Min. penetration seal depth: 150 mm

### Tested installations

- z Plastic-sheathed lines / telecommunication lines / optical fibre cable to Ø 21 mm

### Particularities

- z A soffit frame is not required in the lightweight partition wall
- z Fill depths: b > 15 mm per side (EI 90)
- z In solid ceilings the cable penetration seal is possible with a fire resistance class EI 120

As an aid, a casing of cardboard or plastic, or a backfill of mineral wool can be used.

## System ZZ-Fire protection collar NE



- z European tested in accordance with EN 1366-3:2009
- z Pipe penetration seal for flammable pipe
- z Fire resistance class depending on the type of pipe, type of installation and the installation location to EI 120 -U/U
- z 4 sizes that can be adapted to the respective pipe diameter.
- z Inserted or surface-mount installation is possible

### Tested installations

- z Plastic pipe of PE-HD/ PE/PVC-U/ PVC-HD/ ABS/ SAN+PVC to Ø 160 mm

## System ZZ-Fire protection silicone NE ETA-12/0118

Fire resistance class EI 180. For solid walls and solid ceilings.

### Proven fire-protection silicone - European approved

ZZ-Fire protection silicone NE is suitable for sealing expansion joints in walls and ceilings. As backfill material, not only mineral wool, but also PE, PUR, and polystyrene can be used depending on the application. Mineral wool can be processed quickly and easily due to its low density of 40 kg/m<sup>3</sup>. Expansion joints can be sealed with a fill of  $\Gamma$  5 mm and mineral wool insulation on one side to a joint width up to a joint width of 40 mm. With the lower fill depths of "ZZ-Fire protection silicone NE" and lower density of the mineral wool, the processor saves time and money. Through the verification in accordance with DIN EN ISO 11600 the fire-protection silicone is suitable for outdoor use in construction joints. As specified in the verification, ZZ-Fire protection silicone NE satisfies the class F 20 LM requirements. Expansion and movement joints with up to 20% mechanically induced expansion can be permanently sealed, even under demanding climatic conditions (e.g. temperatures to -20°C). Fire behaviour is classified as flame-retardant in accordance with DIN 4102-B1, and in addition satisfies the class E requirements in accordance with EN 13501-1, due to the European technical approval ETA-12/0118, with ZZ-Fire protection silicone NE joint seals can be classified to a fire resistance class of EI 180. The fire-protection properties also remain intact when used in outdoor areas, this has been tested through trials in accordance with ETAG 026-3 and is reflected in the use category X.



#### Fire safety with movement capacity up to 25%

ZZ fire-protection silicone can be used to produce fire-protection joints that are subject to expansion or shear movements of up to 25%, to fire resistance class EI 120 in ceilings and EI 180 in walls. For this, walls must have a minimum thickness of 100 mm, in ceilings the minimum thickness is 150 mm. The joint backfill must be produced of mineral wool (density up to 40 kg/m<sup>3</sup>). Joint fill depths from 5 mm are possible on one side or on both sides.



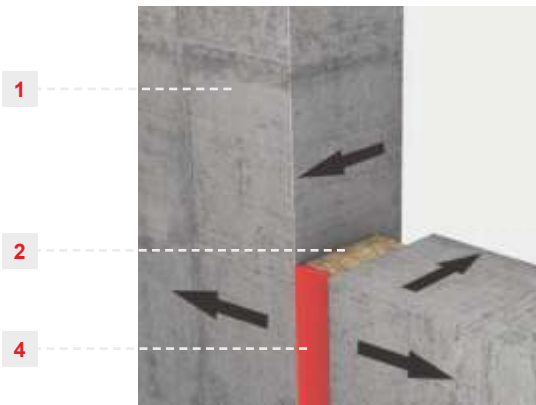
#### Fire-protection joint with movement capacity up to 15%

Fire-protection joints with a joint depth from 5 mm can be produced. PE cords can be used as backfill of the sealant (joint sealant on both sides) in walls and ceilings from 150 mm, to a fire resistance class to EI 120.

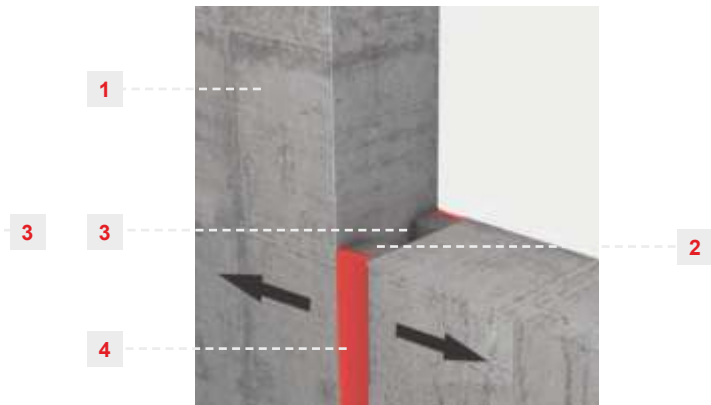


#### Construction joint with fire-protection

Joint seals in walls and ceilings executed on both sides with PE backfill cords and a total movement of 12.5% achieve a fire resistance to EI 120 (joint fill depth from 6 mm). These joint seals simultaneously satisfy class 12.5 E requirements in accordance with DIN EN ISO 11600. With use of mineral wool as backfill material (density from 40 kg/m<sup>3</sup>) the movement capacity can be as much as 20%. For an existing joint seal on one side, fire resistance of EI 120 is achieved in walls and ceilings. Thus class 20 LM in accordance with DIN EN ISO 11600 can be achieved simultaneously.



- 1** Fire resistance: to EI 180  
Implementation areas: Solid walls and ceilings
- 2** Backfill:  
Mineral wool (density 40 kg/m<sup>3</sup>)
- 3** Joint width:  
5 to 40 mm
- 4** Joint fill depths:  
possible on one side from 5 mm



- 1** Fire resistance: to EI 120  
Implementation areas: Solid walls and ceilings
- 2** Backfill:  
PE round cords
- 3** Joint width:  
5 to 40 mm
- 4** Joint fill depths:  
possible on both sides from 5 mm

## System components



Designation	Art. no.	PU
1. ZZ-Fire protection silicone NE, 310 ml	B15H00-0001	20

## Accessories



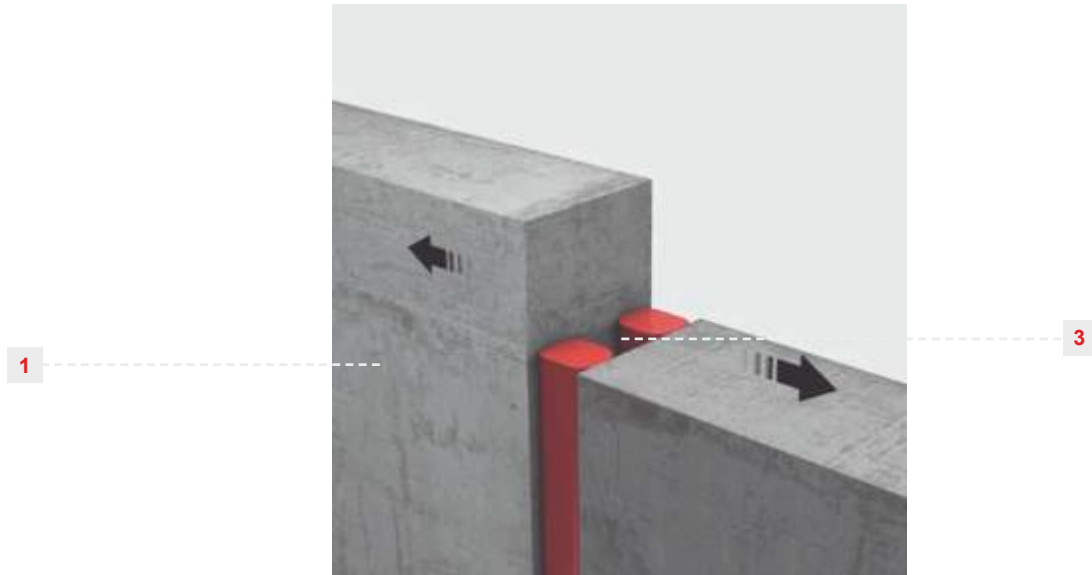
Designation	Art. no.	PU
2. Professional cartridge gun 310 ml	B16H00-0024	1
3. OTTOPrimer 1105, 250 ml	B99H00-0108	1
4. OTTOPE round cord B2	See variants	

Designation	Art. no.	Dimensions (mm)	L (m) per piece	Pc./PU
11. OTTOPE round cord B2 Ø6	B99H00-0098	6	100	1
11. OTTOPE round cord B2 Ø8	B99H00-0099	8	100	1
11. OTTOPE round cord B2 Ø10	B99H00-0100	10	100	1
11. OTTOPE round cord B2 Ø13	B99H00-0101	13	100	1
11. OTTOPE round cord B2 Ø15	B99H00-0102	15	100	1
11. OTTOPE round cord B2 Ø20	B99H00-0103	20	50	1
11. OTTOPE round cord B2 Ø25	B99H00-0104	25	50	1
11. OTTOPE round cord B2 Ø30	B99H00-0105	30	25	1
11. OTTOPE round cord B2 Ø40	B99H00-0106	40	1	20

## Fire-protection joint seal

### System ZZ-Fire protection joint seal NE ETA-12/0119

Fire resistance class to EI 120. For solid walls and solid ceilings




#### Component

- 1** Fire resistance: to EI 120  
Implementation area: Solid walls and ceilings  
Min. wall thickness: 150 mm  
Min. ceiling thickness: 150 mm

#### Joint:





- 2** Joint width: to 60 mm  
Maximum movement capacity:  
25% lateral movement and 7.5% shear movement

### System components

1	Designation	Art. no.	PU		
	1.ZZ-Joint seal NE	See variants			
	Variants	Art. no.	Øsealing element [mm]	L [mm]	PU
	1. ZZ-Joint seal NE Ø16	B08N02-0016	16	1000	20
	1. ZZ-Joint seal NE Ø24	B08N02-0017	24	1000	20
	1. ZZ-Joint seal NE Ø30	B08N02-0018	30	1000	20
	1. ZZ-Joint seal NE Ø39	B08N02-0019	39	1000	20
1. ZZ-Joint seal NE Ø49	B08N02-0020	49	1000	10	

Other formats available on request.

### Accessories

2	3	4	Designation	Art. no.	PU
			2. Knife with serrated blade, wide	B99H00-0047	1
			3. ZZ-Construction silicone 310 ml	B99H00-0110	20
			4. ZZ-Acrylic sealant 300 ml	B99H00-0109	20
			5. Professional cartridge gun 310 ml	B16H00-0024	1

### Sealing compounds



**Building material:** ZZ-Fire protection silicone NE  
**Use category according to ETAG 026-1:** X  
**Classified according to EN 13501-1:** class E  
**Properties:** pasty, smoothable  
**Function:** protection against fire and smoke propagation via component joints

Name	Art. no.	Content ml	PU
ZZ fire-protection silicone NE	B15H00-0001	310	1



#### Implementation areas

Fire-protection joint seal

### Sealing compounds



**Building material:** ZZ-Fire protection mastic NE  
**Use category according to ETAG 026-1:** Z1  
**Classified according to EN 13501-1:** class E  
**Properties:** pasty, can be smoothed and coated over  
**Function:** sealing of single-cable bushings and joints

Name	Art. no.	PU
ZZ mastic NE	B15NN00-0013	12



#### Implementation areas

Penetration seal of cables

### Wrap



**Building material:** ZZ-fire protection rubber  
**Use category according to ETAG 026-1:** Z1  
**Classified according to EN 13501-1:** class E  
**Implementation areas:** busbars, cable and mixed penetration seals  
**Properties:** rubber-like, can be plastically formed, self-adhesive  
**Function:** sheathing of cable bundles, cable carriers and busbar systems

Designation	Length (mm)	Width (mm)	Height (mm)
Wrap	5000	150	3



#### Implementation areas

Prevents heat conductance in the event of fire

## Production of components for further processing

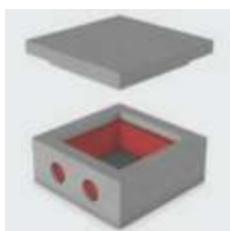
### Profiles cut to size



**Building material:** ZZ-Fire protection foam BDS-N  
**Use category according to ETAG 026-1:** Z1  
**Classified according to EN 13501-1:** class E  
**Implementation areas:** penetration seals, seals, liners, etc.  
**Properties:** soft, flexible  
**Function:** sealing of cable bushings, e.g. of control cabinets

Designation	Length	Width	Height
Profile cut to size	1000	10	10
Profile cut to size	1000	20	20
Profile cut to size	1000	30	30
Profile cut to size	1000	40	40
Profile cut to size	1000	50	50

Other formats available on request.



### Implementation areas

Penetration seals of boxes

### Composite element



**Building material:** ZZ-Fire protection foam BDS-N with silicone outer skin  
**Properties:** soft, flexible, tear-resistant, resistant to weathering  
**Function:** in the event of fire, it protects the EPDM sealing tapes and the concrete flanks in the interior of the joint  
**Dimensions:** Length: up to 20 m (with end-to-end connections)  
 Diameter 20 to 50 mm  
 Delivery on request

In addition to pure PU moulded parts we also have the possibility of manufacturing composite materials on request.



### Implementation areas

Penetration seal of building construction joints or tunnel joints