



## HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables

### Technical Data Sheet and Installation Manual

Fire penetration seal system for single or multiple penetration of single cables, cable bundles, in walls and floors, comprising the fire-resistant sealing compound **HENSOMASTIK® Acrylic** and 2 x 50 mm thick mineral fibre boards coated with **HENSOMASTIK® 5 KS Farbe** or **HENSOMASTIK® 5 KS viskos**.

- Fire resistance up to EI 120 in walls and floors (tested acc. to EN 1366-3, ETA Nr. 23/0318)
- Cable bundles up to 100mm, single cables up to 80mm
- Flexible electrical installation conduits up to 32 mm, PVC or steel conduits up to 16 mm
- Only **HENSOMASTIK® Acrylic** needed – No coating of cables required!
- Application indoors and in protected outdoor areas without driving rain – Use category Y1



Member of  
**DGNB**  
Deutsche Gesellschaft für Nachhaltiges Bauen  
German Sustainable Building Council



# TECHNICAL INFORMATION

## Intended Use

The **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** (ETA No. 23/0318) is a soft fire penetration seal system comprising two min. 50 mm thick mineral fibre boards  $\geq 150 \text{ kg/m}^3$  installed at joint and coated on the external faces with **HENSOMASTIK® 5 KS Farbe** or **HENSOMASTIK® 5 KS viskos** (construction product abZ No. Z-19.11-1246) with dry film thickness of min. 1 mm. The **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** is used to form a fire penetration seal to reinstate the fire resistance performance of flexible and rigid wall and rigid floor constructions, where they have been provided with apertures for the penetration of single or multiple electrical supply lines.

A blank fire penetration seal may also be installed, temporarily or permanently, as reserve for post-installations.

**HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** is supplied as packs of pre-coated boards with final dry film thickness with dimensions of 600 x 1000 mm. The mineral fibre boards are cut to size and friction fitted into the supporting element and around penetrating services.

In walls, any gap between mineral fibre boards and reveal is closed from both sides with **HENSOMASTIK® Acrylic** (construction product ETA No. 21/0816), which is supplied in cartridges or sleeves, and a 20 mm wide circumferential coating is applied with a dry film thickness of min. 1 mm by smoothing out the excess material with a spatula or putty knife. In floors, any gap between mineral fibre boards and reveal is closed from the underside of the floor accordingly.

The annular gap around penetrating services is sealed with **HENSOMASTIK® Acrylic** in full depth.

Permitted Services		Max. Ø [mm]	Technical Assessment Document	
	Single cables	$\leq 80$	European Technical Assessment: In accordance with:	ETA No. 23/0318 EN 1366-3
	Cable bundles	$\leq 100/21$		
	HENSOTHERM® Service Transit ST 250	$\leq 110$		
	Single polyolefin flexible electrical installation conduits, with or without cables	$\leq 32/21$		
	Single steel or PVC electrical installation pipes, with or without cables	$\leq 16/16$		
	Cable trays, ladders and support structures	$\leq 500$		
Construction Elements / Min. Thickness				
	Flexible walls:			$\geq 100 \text{ mm}$
	Rigid walls:			$\geq 100 \text{ mm}$
	Rigid floors:			$\geq 150 \text{ mm}$

## Product Properties and Advantages

- Fire resistance tested according to EN 1366-3 up to EI 120 in walls and floors
- Simple to apply, surface can be smoothed out with a spatula
- No priming necessary, surfaces just need to be dusted off
- Application temperature range from +5 to +40 °C
- The seal will retain a degree of elasticity for joint movement (max. deformation 14 %)
- Thermal activation already at approx. 150 °C
- Non-toxic, low smoke, and halogen-free
- Can be over painted with most paints once fully cured
- Hardens quickly and tack free after 1 hour (the final fire performance specification has been derived when the filler has been let to cure for a month)
- Min. 12 months storage time (under correct conditions)
- Also usable for single fire penetration seals and in linear joints
- High-end formula made in Germany – designed for worldwide use
- Creamy compound with good adhesion to mineral fibre boards
- High sound insulation formula
- Also available in 300 ml and 600 ml foil sleeves – Reduce waste!
- Silicone-free



**No coating of cables required – Quick installation, highly cost effective!**




# TECHNICAL INFORMATION

## Single Products in this Product System

### HENSOMASTIK® Acrylic

Product Name	Container / Packing Size	Article Number / EAN Code
 <p>HENSOMASTIK® Acrylic</p>	310ml cartridge (20 cartridges per box)	4250153545903 (4250153545910)
 <p>HENSOMASTIK® Acrylic</p>	300 ml sleeve (20 sleeves per box)	4250153545927 (4250153545934)
	600 ml sleeve (20 sleeves per box)	4250153545941 (4250153545958)

### Mineral Fibre Boards

Product Name	Container / Packing Size	Article Number / EAN Code
 <p>Ready-to-use mineral fibre board, 600 x 1.000 x 50 mm, coated with HENSOMASTIK® 5 KS Farbe (DFT = 1 mm)</p>	80 pcs. (packed on pallet)	4250153504887

### HENSOTHERM® Service Transit

Product Name	Diameter / Length	Container / Packing Size	Article Number / EAN Code	
	HENSOTHERM® ST 250-63	DN 63 mm, Length 250 mm	28 pcs.	4250153545507
	HENSOTHERM® ST 250-90	DN 90 mm, Length 250 mm	12 pcs.	4250153545514
	HENSOTHERM® ST 250-110	DN 110 mm, Length 250 mm	9 pcs.	4250153545521

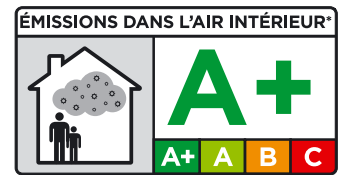
# TECHNICAL INFORMATION

Product Characteristics HENSOMASTIK® Acrylic	
Giscode:	M-DF01
Reaction to fire (EN 13501-1):	Euroclass E
Building material class (DIN 4102-1):	B2
Colour:	White, RAL 9010
Curing time (at 20 °C):	5 to 15 days
Skimming time (dust dry):	15 to 60 minutes
Max total deformation (ISO 8339):	14 %
Durability classes:	Y1 / Y2 / Z1 / Z2
Shelf life (at 20° C and dry storage):	min. 12 months
Storage and transport temperature:	+ 5 °C to + 30 °C Keep free from frost!
Application temperature range:	+ 5 °C to + 40 °C
Airborne sound insulation (ISO 717-1):	Rw, max = 66 dB

Product Characteristics HENSOMASTIK® 5 KS Farbe / HENSOMASTIK® 5 KS viskos	
Giscode:	M-DF01
Reaction to fire (EN 13501-1):	Euroclass E
Building material class (DIN 4102-1):	B2
Colour:	White, RAL 9010
Curing time (at 20 °C):	1 to 2 days
Skimming time (dust dry):	3 to 6 hours
Weather and UV-resistance	DIN 53384
Durability classes:	X / Y1 / Y2 / Z1 / Z2
Shelf life (at 20° C and dry storage):	min. 12 months
Storage and transport temperature:	+ 5 °C to + 30 °C Keep free from frost!
Application temperature range:	+ 40 °C to + 80 °C
Coverage rate for 1 mm DFT:	min. 1.4 mm wet (ca. 1.8 kg/m²)

## Environment and Emission Data

**HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** comprises the water-based construction products **HENSOMASTIK® Acrylic**, a ready for use flexible white acrylic sealant, and **HENSOMASTIK® 5 KS Farbe / HENSOMASTIK® 5 KS viskos** ablative fire-protection coatings. All construction products in the product system are free of solvents, APEO, halogens, borates, plasticisers or silicone and have certified low emissions, are environmental and user friendly, and compliant to all common regulations and protocols for building materials and sustainable construction.



### HENSOMASTIK® Acrylic

Regulation or Protocol	Assessment
French VOC regulation	A+
French CMR components	Compliant
ABG / AgBB guidelines DIBt	Compliant
Finnish emission class for building materials	M1
Belgian Royal Decree for construction products	Compliant

Compound	Emission rate after 3 Days	Emission rate after 28 Days
TVOC	≤ 150 µg/m³	≤ 20 µg/m³
TSVOC	≤ 5 µg/m³	≤ 5 µg/m³
R value	< 1	< 1
Carcinogenic	< 1 µg/m³	< 1 µg/m³

### HENSOMASTIK® 5 KS Farbe / HENSOMASTIK® 5 KS viskos

With its certified non-VOC property, **HENSOMASTIK® 5 KS** meets the requirements of LEED credit EQ c4.2 and is classified in emission class A+ (very low emission) according to the French emission regulations. It is registered in the DGNB Navigator (CDDWRA) and holds an environmental product declaration certified by IBU (EPD-RHG-20140204-IAA1-DE).



Regulation or Protocol	Assessment
French VOC regulation	A+
French CMR components	Compliant
ABG / AgBB guidelines DIBt	Compliant
Leed v4.2	Compliant
Belgian Royal Decree for construction products	Compliant

Compound	Emission rate after 3 Days	Emission rate after 28 Days
TVOC	≤ 5 µg/m³	≤ 5 µg/m³
TSVOC	≤ 5 µg/m³	≤ 5 µg/m³
R value	< 1	< 1
Carcinogenic	< 1 µg/m³	< 1 µg/m³

# TECHNICAL INFORMATION

## Permitted Construction Elements

The specific elements of construction that the product system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** may be used to provide a fire penetration seal in, are:

**Flexible walls:** The wall must have a minimum thickness of 100 mm and consist of a wooden or steel stud structure lined on both faces with at least two layers of 12.5 mm thick boards. A minimum distance of 100 mm must be maintained between the seal and the studs, and the gap between the stud and the seal must be closed with at least 100 mm of insulation material of class A1 or A2 according to EN 13501-1.

**Rigid walls:** The wall must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m<sup>3</sup>.

**Rigid floors:** The floor must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m<sup>3</sup>.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

## Maximum Seal Size

The permitted max seal size of a **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** fire penetration seal with or without services is 600 mm x 600 mm (w x h or h x w) in walls and 1200 mm x 2000 mm (w x l) in floors, respectively for floor constructions with length > 2000 mm, permissible max seal size 1125 mm x 8250 mm (w x l).

## Permitted Minimum Spacing and Distance of the First Support

The following minimum spacings apply for all construction variants and applications (see drawing for explanation).

### Distance of the first support:

All services shall be supported at maximum **250 mm** distance from both sides of a wall or the top of the floor.

### Legend:

- 1: HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables
- 2: Penetrating services inside the seal area
- 3: Supporting construction element
- 4: Other fire penetration seals, openings or installations

### Minimum spacing between penetrating services:

- |  |          |
|--|----------|
| a1-1: between cables/cable bundles/cable conduits      | ≥ 0 mm   |
| a1-2: between cable trays side to side                 | ≥ 50 mm  |
| a1-3: between cable trays on top of each other (wall)  | ≥ 50 mm  |
| a1-4: between cable trays on top of each other (floor) | ≥ 150 mm |
| a1-5: between HENSOTHERM® ST Service Transit           | ≥ 50 mm  |

### Minimum spacing between penetrating services and seal edges:

- |   |         |
|---|---------|
| b1-1: between cables/cable trays and seal edges | ≥ 50 mm |
| b1-2: between cable conduits and seal edges     | ≥ 50 mm |
| b1-3: between HENSOTHERM® ST Service Transit    | ≥ 0 mm  |

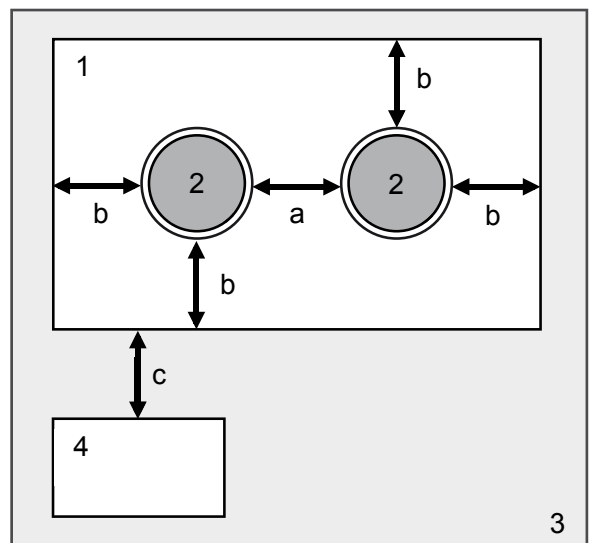
### Minimum spacing between other openings or installations:

#### c1-1 Other fire penetration seals:

≥ 20 cm, if one or both of the adjacent openings is larger than 40 x 40 cm, otherwise ≥ 10 cm.

#### c1-2 Other openings or installations:

≥ 20 cm, if one or both of the adjacent openings is larger than 20 x 20 cm, otherwise ≥ 10 cm.



# TECHNICAL INFORMATION

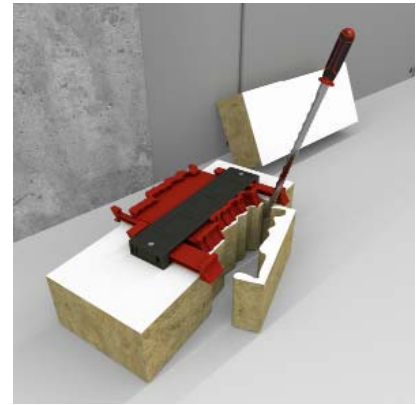
## Installation Steps



Measure length and width of the opening and penetrating services and transfer the sizes to the mineral fibre boards.



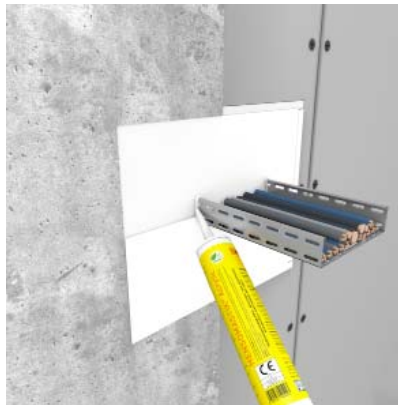
To transfer the shape of electrical cables and cable support structures the use of a contour gauge is recommended.



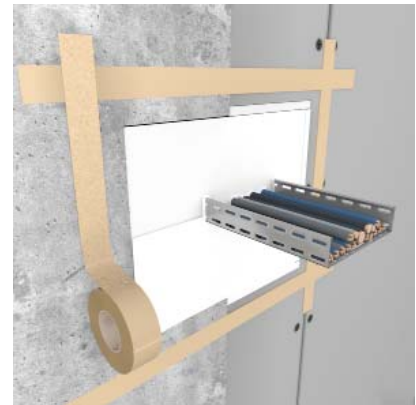
Cut the ready-to-use mineral fibre boards in perfectly fitting pieces to be installed precisely in the opening.



Apply a thick layer of **HENSOMASTIK® Acrylic** to butter all cut edges and the outer edges of the mineral fibre boards.



Fill all gaps > 10 mm with loose mineral fibre material, then with **HENSOMASTIK® Acrylic** from both sides in full depth.



Apply duct tape for a min. 20 mm wide circumferential coating.



Apply a thick layer of **HENSOMASTIK® Acrylic** to seal the gap between mineral fibre boards and reveals.



Smooth out the excess material with a spatula or putty knife to form the circumferential coating (DFT min. 1 mm).



Remove tape. Colour may be designed using top coatings **HENSOTOP SB** or **HENSOTOP WB** in 50 - 100 µm dry film thickness.

**Note:** In floors, any gap between mineral fibre boards and reveal is closed and a circumferential coating is applied from the underside of the floor accordingly.

**Caution!** Installations of the **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** in floors must be additionally secured against stepping on!

# TECHNICAL INFORMATION

## Overview of Applications and Construction Details

### A. Flexible or Rigid Wall $\geq 100$ mm

A.		Application	Page
1.		Blank seal (no penetrating services)	10
2.		Single cables, cable bundles, electrical installation conduits (PVC or steel) and cable support structures	11
3.		Polyolefin flexible cable conduits with or without cables	12
4.		Single cables, cable bundles or electrical installation pipes (EIP) led through a HENSOTHERM® Service Transit	13

### B. Rigid Floor $\geq 150$ mm

B.		Application	Page
1.		Blank seal (no penetrating services)	11
2.		Single cables, cable bundles, electrical installation conduits (PVC or steel) and cable support structures	12
3.		Polyolefin flexible cable conduits with or without cables	13
4.		Single cables, cable bundles or electrical installation pipes (EIP) led through a HENSOTHERM® Service Transit	14

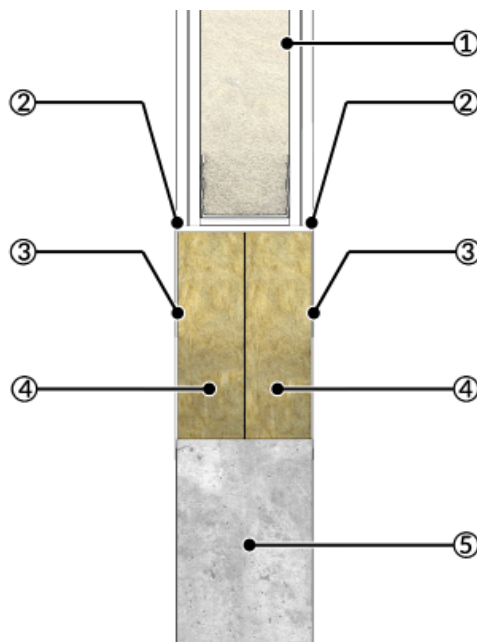
# TECHNICAL INFORMATION

## Flexible or Rigid Wall $\geq 100$ mm | Blank seal

### A.1. Blank seal, wall application

**Construction details:** Blank HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables comprising two  $\geq 50$  mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup> installed at joint and coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos in dry film thickness  $\geq 1$  mm.

The mineral fibre boards are cut to size and friction fitted into the supporting element. Any gap between boards and reveal is closed with HENSOMASTIK® Acrylic and a 20 mm circumferential coating (DFT  $\geq 1$  mm) is applied from both sides of the wall by smoothing out the excess material with a spatula or putty knife.



1 = Flexible wall, 2 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 3 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 4 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup>, 5 = Rigid wall

#### A.1.1. Blank seal, wall application

Services	Classification
No penetrating services	EI 90



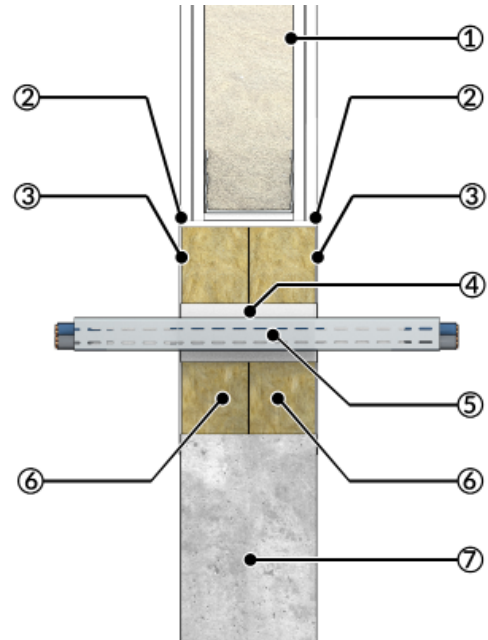
# TECHNICAL INFORMATION

## Flexible or Rigid Wall $\geq 100$ mm | Electrical supply lines and support structures

### A.2. Single cables, cable bundles, electrical installation conduits or cable trays

**Construction details:** Single cables, cable bundles, electrical installation conduits (PVC or steel), cable trays or support structures in a HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables.

The annular gap is sealed from both sides with HENSOMASTIK® Acrylic in full depth.



1 = Flexible wall, 2 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 3 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 4 = Annular gap sealed from both sides with HENSOMASTIK® Acrylic in full depth, 5 = Single cables, bundles, electrical installation conduits, cable trays or cable support structures, 6 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup>, 7 = Rigid wall

#### A.2.1. Single cables, cable bundles, electrical installation conduits or cable trays

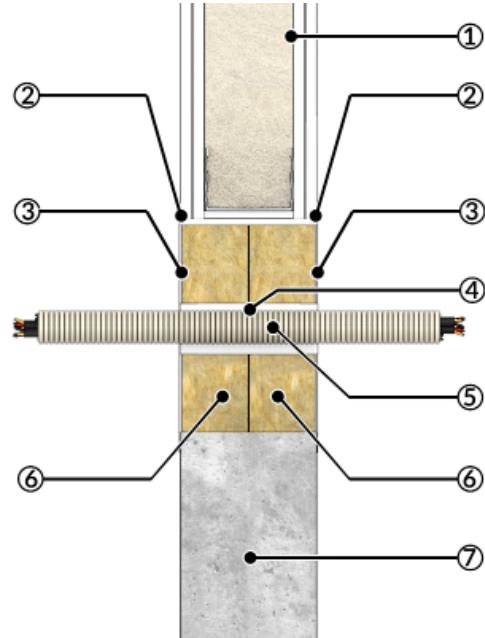
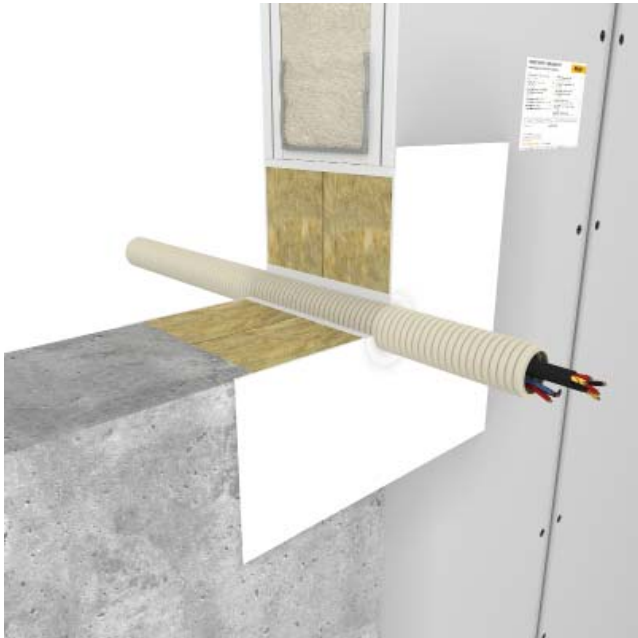
Services	Max. diameter bundle (mm)	Max. diameter single cable conduit (mm)	Max. diameter single cable (mm)	Classification
Sheathed cables of all types, single or in a bundle	100	-	21	EI 90
Telecommunication cables, single or in a bundle	100	-	21	EI 90
Aluminium cable type NAYY4x16RE, single	-	-	23	EI 90
C1, C2 or C3 cable, single	-	-	50	EI 60
D1 or D3 cable, single	-	-	80	EI 60
D2 cable, single	-	-	80	EI 90
E cable, single	-	-	80	EI 45
Sheathed cables of all types, single	-	-	80	EI 45
Cable conduit PVC	-	16	16	EI 90 U/C
Cable conduit Steel	-	16	16	EI 60 C/U
Cable tray or ladder	-	500	-	EI 90

# TECHNICAL INFORMATION

## Flexible or Rigid Wall $\geq 100$ mm | Polyolefin flexible cable conduits with or without cables

### A.3. Polyolefin flexible cable conduits with or without cables

**Construction details:** Polyolefin flexible cable conduits with or without cables in a HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables.  
 The annular gap is sealed from both sides with HENSOMASTIK® Acrylic in full depth.



1 = Flexible wall, 2 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 3 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 4 = Annular gap sealed from both sides with HENSOMASTIK® Acrylic in full depth, 5 = Polyolefin flexible cable conduit with or without cables, 6 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup>, 7 = Rigid wall

#### A.3.1. Polyolefin flexible cable conduits with or without cables

Services	Max. diameter single conduit (mm)	Max. diameter single cable conduit (mm)	Classification
Polyolefin flexible cable conduits without cables, single	32	-	EI 60 C/C
Polyolefin flexible cable conduits with sheathed cables of all types, single	32	21	EI 60 C/C
Polyolefin flexible cable conduits with B cable, single	32	21	EI 90 C/C

# TECHNICAL INFORMATION

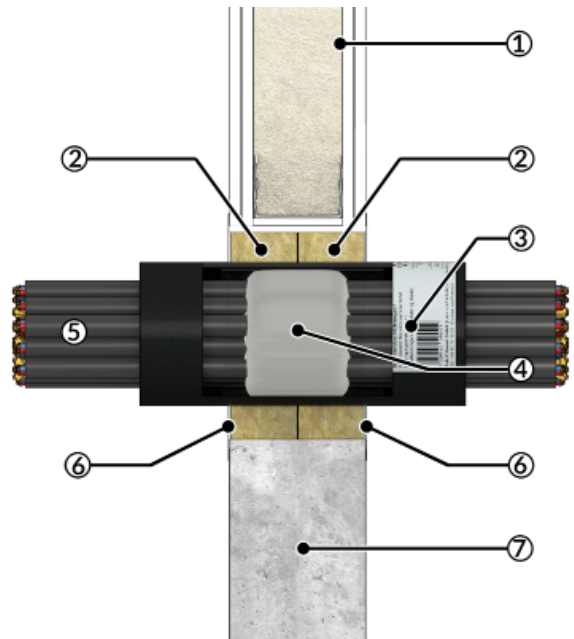
## Flexible or Rigid Wall $\geq 100$ mm | Electrical supply lines led through a HENSOTHERM® Service Transit

### A.4. Single cables, cable bundles or EIP led through a HENSOTHERM® Service Transit

**Construction details:** Single cables, cable bundles, electrical installation pipes (PVC) with or without cables led through a HENSOTHERM® Service Transit with length 250 mm, friction fitted into in a HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables.

The HENSOTHERM® Service Transit is positioned centrally in the mineral fibre boards, protruding 75 mm on each side. The maximum permissible occupancy of the HENSOTHERM® Service Transit is 100% of its inner cross-section. The ceramic wool plug is adapted to fit the diameter of the penetrating services and re-installed centrally in the HENSOTHERM® Service Transit, sealing any remaining free spaces around the penetrating services. Allowed annular space width (a1) 0 mm, i.e. no annular gap, and any remaining space filled with HENSOMASTIK® Acrylic.

Provided that all electrical supply lines in the HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables are led through HENSOTHERM® Service Transits or only blank HENSOTHERM® Service Transits are used, the max. permissible seal size is 1200 mm x 2000 mm.



1 = Flexible wall, 2 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup> coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 3 = HENSOTHERM® Service Transit (length 250 mm), friction fitted, any voids filled with HENSOMASTIK® Acrylic, 4 = Ceramic wool plug, 5 = Single cables, cable bundles or electrical installation pipes (PVC), 6 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 7 = Rigid wall

#### A.4.1. Single cables, cable bundles or EIP led through a HENSOTHERM® Service Transit

Services	Classification		
	HENSOTHERM® ST 250 Diameter 63 mm	HENSOTHERM® ST 250 Diameter 90 mm	HENSOTHERM® ST 250 Diameter 110 mm
PVC pipes $\leq 32$ mm without cables	EI 120	n. a.	n. a.
PVC pipes $\leq 32$ mm with sheathed cables of all types $\leq 21$ mm, single or in a bundle	EI 120	n. a.	n. a.
PVC pipes $\leq 32$ mm with cables A1, A2, A3 or B, single or in a bundle	EI 120	EI 90	EI 90
With cables A1, A2, A3 or B, single or in a bundle	EI 120	EI 120	EI 120
No penetrating services	EI 120	EI 120	EI 120

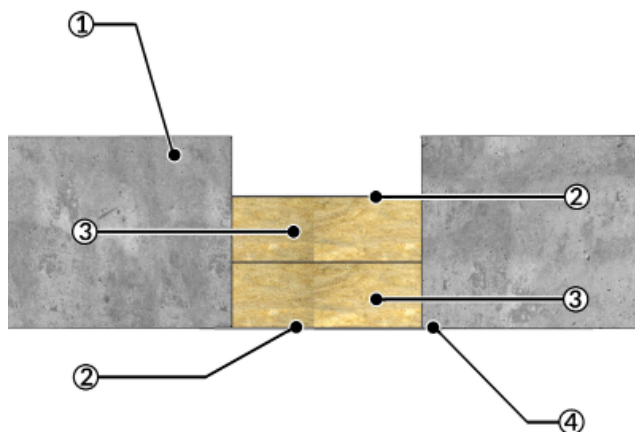
# TECHNICAL INFORMATION

## Rigid Floor $\geq$ 150 mm | Blank seal

### B.1. Blank seal, floor application

**Construction details:** Blank HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables comprising two  $\geq$  50 mm thick Rockwool Hardrock 040 mineral fibre boards  $\geq$  150 kg/m<sup>3</sup> installed at joint, flush with the underside of the floor, and coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos in dry film thickness  $\geq$  1 mm.

The mineral fibre boards are cut to size and friction fitted into the supporting element. On the underside of the floor, any gap between boards and reveal is closed with HENSOMASTIK® Acrylic and a 20 mm circumferential coating (DFT  $\geq$  1 mm) is applied by smoothing out the excess material with a spatula or putty knife.



1 = Rigid floor, 2 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 3 = 2 x 50 mm thick mineral fibre boards  $\geq$  150 kg/m<sup>3</sup>, 4 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20mm wide circumferential coating (DFT = 1 mm)

#### B.1.1. Blank seal, floor application

Services	Classification
No penetrating services	EI 90

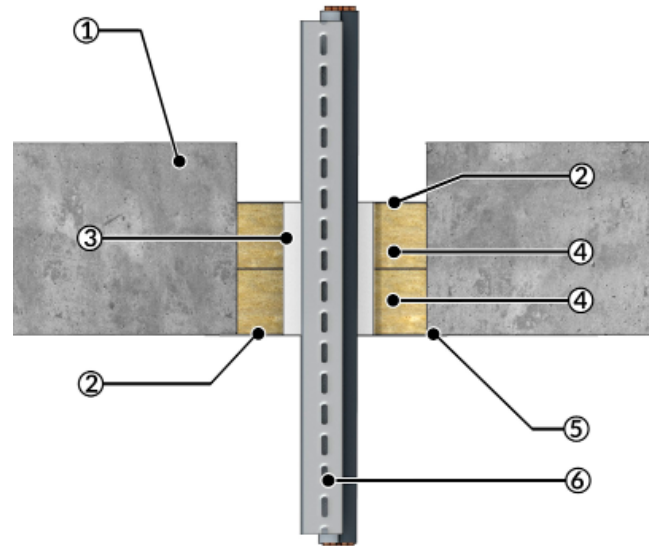
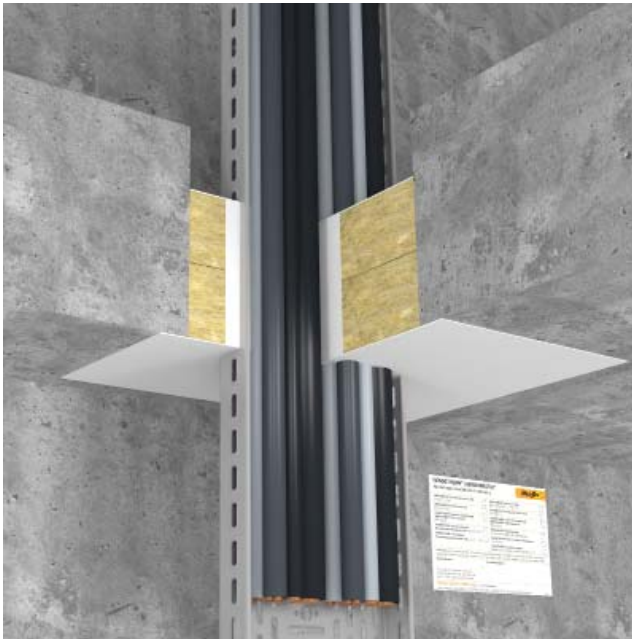
# TECHNICAL INFORMATION

## Rigid Floor $\geq 150$ mm | Electrical supply lines and support structures

### B.2. Single cables, cable bundles, electrical installation conduits or cable trays

**Construction details:** Single cables, cable bundles, electrical installation conduits (PVC or steel), cable trays or support structures in a HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables.

The annular gap is sealed from both sides with HENSOMASTIK® Acrylic in full depth.



1 = Rigid floor, 2 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 3 = Annular gap sealed from both sides with HENSOMASTIK® Acrylic, 4 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup>, 5 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 6 = Single cables, bundles, electrical installation conduits or cable support structures

#### B.2.1. Single cables, cable bundles, electrical installation conduits or cable trays

Services	Max. diameter bundle (mm)	Max. diameter single cable conduit (mm)	Max. diameter single cable (mm)	Classification
Sheathed cables of all types, single or in a bundle	100	-	21	EI 60
Telecommunication cables, single or in a bundle	100	-	21	EI 60
Aluminium cable type NAYY4x16RE, single	-	-	23	EI 120
A1 cable, single	-	-	21	EI 120
A2 cable, single	-	-	21	EI 90
C1 cable, single	-	-	50	EI 60
C2 cable, single	-	-	50	EI 120
C3 cable, single	-	-	50	EI 30
D1 cable, single	-	-	80	EI 60
D2 cable, single	-	-	80	EI 120
D3 cable, single	-	-	80	EI 45
E cable, single	-	-	80	EI 60
Sheathed cables of all types, single	-	-	80	EI 30
Cable conduit PVC	-	16	16	EI 120 U/C
Cable conduit Steel	-	16	16	EI 90 C/U
Cable tray or ladder	-	500	-	EI 120

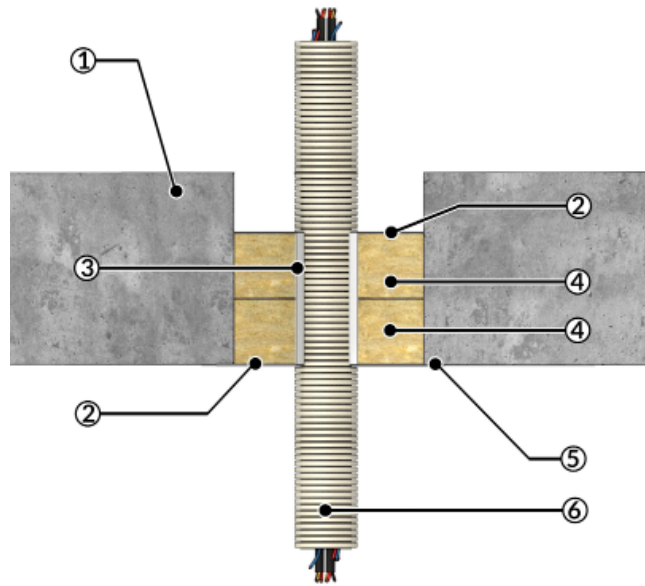
# TECHNICAL INFORMATION

## Rigid Floor $\geq 150$ mm | Polyolefin flexible cable conduits with or without cables

### B.3. Polyolefin flexible cable conduits with or without cables

**Construction details:** Polyolefin flexible cable conduits with or without cables in a HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables.

The annular gap is sealed from both sides with HENSOMASTIK® Acrylic in full depth.



1 = Rigid floor, 2 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos (DFT = 1 mm), 3 = Annular gap sealed from both sides with HENSOMASTIK® Acrylic, 4 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup>, 5 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 6 = Polyolefin flexible cable conduit with or without cables

#### B.3.1. Polyolefin flexible cable conduits with or without cables

Services	Max. diameter bundle (mm)	Max. diameter single cable conduit (mm)	Max. diameter single cable (mm)	Classification
Polyolefin flexible cable conduits without cables	32	-	21	EI 120 C/C
Polyolefin flexible cable conduits with A1, A2, A3 or F cables	32	21	21	EI 120 C/C
Polyolefin flexible cable conduits with sheathed cables of all types	32	21	23	EI 90 C/C

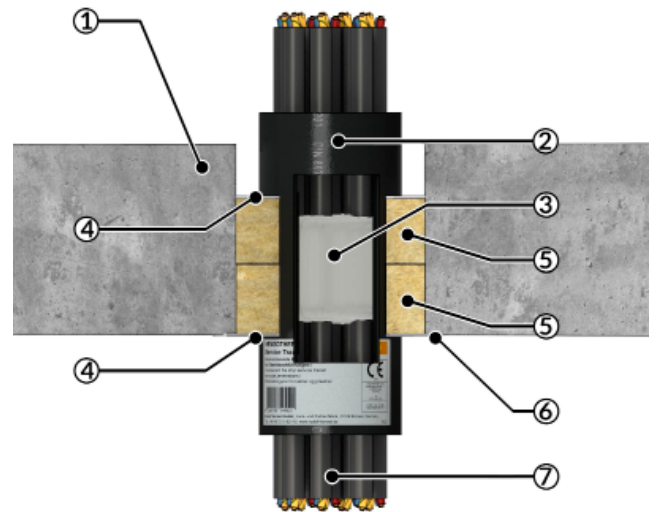
# TECHNICAL INFORMATION

## Rigid Floor $\geq 150$ mm | Electrical supply lines led through a HENSOTHERM® Service Transit

### B.4. Single cables, cable bundles or EIP led through a HENSOTHERM® Service Transit

**Construction details:** Blank HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables comprising two  $\geq 50$  mm thick Rockwool Hardrock 040 mineral fibre boards  $\geq 150$  kg/m<sup>3</sup> installed at joint, flush with the underside of the floor, and coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos in dry film thickness  $\geq 1$  mm.

The mineral fibre boards are cut to size and friction fitted into the supporting element. On the underside of the floor, any gap between boards and reveal is closed with HENSOMASTIK® Acrylic and a 20 mm circumferential coating (DFT  $\geq 1$  mm) is applied by smoothing out the excess material with a spatula or putty knife.



1 = Rigid floor, 2 = HENSOTHERM® Service Transit (length 250 mm), friction fitted, any voids filled with HENSOMASTIK® Acrylic, 3 = Ceramic wool plug, 4 = Mineral fibre boards coated on the external faces with HENSOMASTIK® 5 KS Farbe or viskos (DFT = 1 mm), 5 = 2 x 50 mm thick mineral fibre boards  $\geq 150$  kg/m<sup>3</sup>, 6 = Gap between mineral fibre boards and reveal closed with HENSOMASTIK® Acrylic, excess material smoothed out into a min. 20 mm wide circumferential coating (DFT = 1 mm), 7 = Single cables, cable bundles or electrical installation pipes (PVC)

#### B.4.1. Single cables, cable bundles or EIP led through a HENSOTHERM® Service Transit

Services	Classification		
	HENSOTHERM® ST 250 Diameter 63 mm	HENSOTHERM® ST 250 Diameter 90 mm	HENSOTHERM® ST 250 Diameter 110 mm
PVC pipes $\leq 32$ mm without cables	EI 120	n. a.	n. a.
PVC pipes $\leq 32$ mm with sheathed cables of all types $\leq 21$ mm, single or in a bundle	EI 90	n. a.	n. a.
PVC pipes $\leq 32$ mm with cables A1, A2, A3 or B, single or in a bundle	EI 90	EI 120	EI 120
With cables A1, A2, A3 or B, single or in a bundle	EI 90	EI 120	EI 120
No penetrating services	EI 120	EI 120	EI 120

# TECHNICAL INFORMATION

## Work Safety

Use system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** products in accordance with all applicable local and national regulations. Wear protective clothing and avoid contact with eyes and skin. See material Safety Data Sheet (SDS) for further information.



**Giscode: M-DF01**

## Retrofitting

Penetrating services sealed with system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** may be retrofitted. Following a retrofit, the seal must be returned to its intended state. The specifications in the technical assessment document (ETA) and installation instructions must be observed.

## Reuse

Components of a **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** penetration seal can be reused after a retrofit or deconstruction.

A **HENSOTHERM® Service Transit** can be reused, provided that the **HENSOTHERM® Service Transit** and its intumescent lining of **HENSOTHERM® 7 KS Gewebe** are not damaged. In particular, the **HENSOTHERM® Service Transit** must not be cut to length or slit for the removal. For a re-installation, the fire penetration seal must be returned to its intended state. The specifications in the technical assessment document (ETA) and installation instructions must be observed.

## Inspection and Maintenance

The fire protection properties of system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** seals are safeguarded over the service life only when the system is maintained in proper working condition, a regular inspection for possible damage and maintenance is recommended. All penetrations seals which are subsequently damaged or modified should be made good using system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** products only. The developer/principal must be referred thereto by the applicator/commissioning company.

## Disposal

The materials of system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** seal must be handled like waste paints and varnishes. The applicable national laws and regulations must be observed.

## Labelling

In Germany and Switzerland, following the installation, by law each system **HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables** seal must be marked in close proximity with a permanent label affixed to the wall/floor according to national regulations. Such label is highly recommended also for other countries to inform succeeding applicator/commissioning companies on the materials used and where to look for further information.



# NOTES

A large grid of small dots, intended for taking notes. The grid consists of approximately 30 columns and 40 rows of dots, spaced evenly across the page.

Our technical advisers will be pleased to assist you with your enquiries.  
Further details can be downloaded from: [www.rudolf-hensel.de](http://www.rudolf-hensel.de)

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