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to Article 29 of the Regulation (EU)
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Parliament and of the Council of 9
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MEMBER OF EOTA



European Technical Assessment ETA-23/0318 of 2023/05/26

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 66 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:

HENSOMASTIK® Acrylic Penetration Seal
2x50 mm for Cables

Product family to which the above construction product belongs:

Fire stopping product – penetration seals.

Manufacturer:

Rudolf Hensel GmbH
Lauenburger Landstraße 11
DE-21039 Börnsen
Telephone: +49 40 72106210
www.rudolf-hensel.de

Manufacturing plant:

Rudolf Hensel GmbH
Lauenburger Landstraße 11
DE-21039 Börnsen

This European Technical Assessment contains:

15 pages including 3 annexes which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, based on:

European Assessment Document (EAD) No. 350454-00-1104: Fire Stopping and fire sealing products – Penetration seals

This version replaces:

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product.

HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables is a coated board system comprising two ≥ 50 mm Rockwool Hardrock 040 mineral fibre boards ≥ 150 kg/m³ installed at joint and coated on the external faces with HENSOMASTIK® 5 KS viskos or HENSOMASTIK® KS Farbe, dry film thickness of min. 1 mm, and used to form a penetration seal to reinstate the fire resistance performance of wall and floor constructions, where they have been provided with apertures for the penetration of single, multiple or mixed services.

HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables is supplied as a kit of pre-coated boards 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 (ETA 21/0816), which is supplied in cartridges or sleeves, and a 20 mm 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 with HENSOMASTIK® Acrylic and a 20 mm circumferential coating is applied to the underside of the floor with a dry film thickness of min. 1 mm by smoothing out the excess material with a spatula or putty knife.

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

HENSOTHERM® Service Transit (length 250 mm) may also be incorporated in different diameters, see construction details in annex A.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The construction product HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables is assessed on the basis of EAD 35054-00-1104, as a fire stopping product, penetration seal.

The HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables is used to form a penetration seal around combustible- and metal pipes to reinstate the fire resistance performance of a separating element: Flexible or rigid wall of min. 100 mm thickness, or rigid floors of minimum 150 mm thickness, temporarily or permanently where they have been provided with apertures, which are penetrated by various services such like cable or pipe penetration.

The construction product HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables is intended for use as a component with a fire protection effect in building elements, assembled systems or constructions that are subject to requirements related to fire protection. Their reactive effect prevents heat transmission and fire spreading in the event of fire.

More information in table 3: “Performance of the product and references to the methods used for its assessment”.

The fire sealing products are to be installed according to the manufacturer’s installation manual.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables of 10 years, provided the manufacturers conditions laid down in the manufacturers data sheet for the packaging, transport, storage, installation, use, maintenance and repair are met.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by the Technical Assessment Body issuing an ETA based on the EAD No. 350454-00-1104 but are regarded only as means for expressing the expected economically reasonable working life of the product.

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

Characteristic	Assessment of characteristic									
3.2 Safety in case of fire (BWR2)										
Reaction to fire	The product is classified as E in accordance with EN 13501-1 and Commission Delegated Regulation 2016/364									
Resistance to fire	The product is classified according to EN 13501-2, information can be found in annex A-C									
3.3 Hygiene, health and the environment (BWR3)										
Air permeability (material property)	No performance assessed									
Water Permeability (material property)	No performance assessed									
Content, emission and/or release of dangerous substances*	<p>Release scenario: IA2</p> <table border="1"> <thead> <tr> <th>HENSOMASTIK® Acrylic</th> <th>After 3 days [µg/m³]</th> <th>After 28 days [µg/m³]</th> </tr> </thead> <tbody> <tr> <td>TSVOC</td> <td>≤ 5</td> <td>≤ 5</td> </tr> <tr> <td>TVOC</td> <td>≤ 150</td> <td>≤ 20</td> </tr> </tbody> </table>	HENSOMASTIK® Acrylic	After 3 days [µg/m ³]	After 28 days [µg/m ³]	TSVOC	≤ 5	≤ 5	TVOC	≤ 150	≤ 20
HENSOMASTIK® Acrylic	After 3 days [µg/m ³]	After 28 days [µg/m ³]								
TSVOC	≤ 5	≤ 5								
TVOC	≤ 150	≤ 20								
3.4 Safety in use (BWR4)										
Mechanical resistance and stability	No performance assessed									
Resistance to impact/movement	No performance assessed									
Adhesion	No performance assessed									
Durability	<p>Use condition: Y₁ Effects of over-painting with epoxy resin, polyurethane acrylic, alkyd resin, or plastic dispersion is assessed to have no direct influence on the surface hardness of the test specimen.</p>									
3.5 Protection against noise (BWR5)										
Airborne sound insulation	No performance assessed									
3.6 Energy Economy and heat retention (BWR6)										
Thermal properties	No performance assessed									
Water vapour permeability	No performance assessed									

See additional information in section 3.9 – 3.10.

*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.9 Methods of verification

The characteristic values of the joint sealing system are based on the EAD 350454-00-1104.

3.10 General aspects related to the fitness for use of the product.

The verification of durability is part of testing the essential characteristics. HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables may be used in end-use applications according to the provisions for use category Y₁ (intended for use at temperatures below 0°C with exposure to UV, but no exposure to rain) without expecting significant changes of the characteristics relevant for fire protection. Products that meet the requirements for type Y₁ also meet the requirement for type Y₂, Z₁ and Z₂.

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

HENSOMASTIK® Acrylic Penetration Seal 2x50 mm for Cables is manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

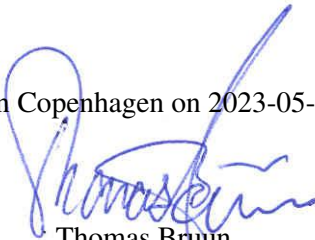
4.1 AVCP system

According to the decision 1999/454/EC of the European Commission, as amended, the system(s) of assessment and verification of constancy of performance is system 1 (see Annex V to Regulation (EU) No 305/2011).

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD.

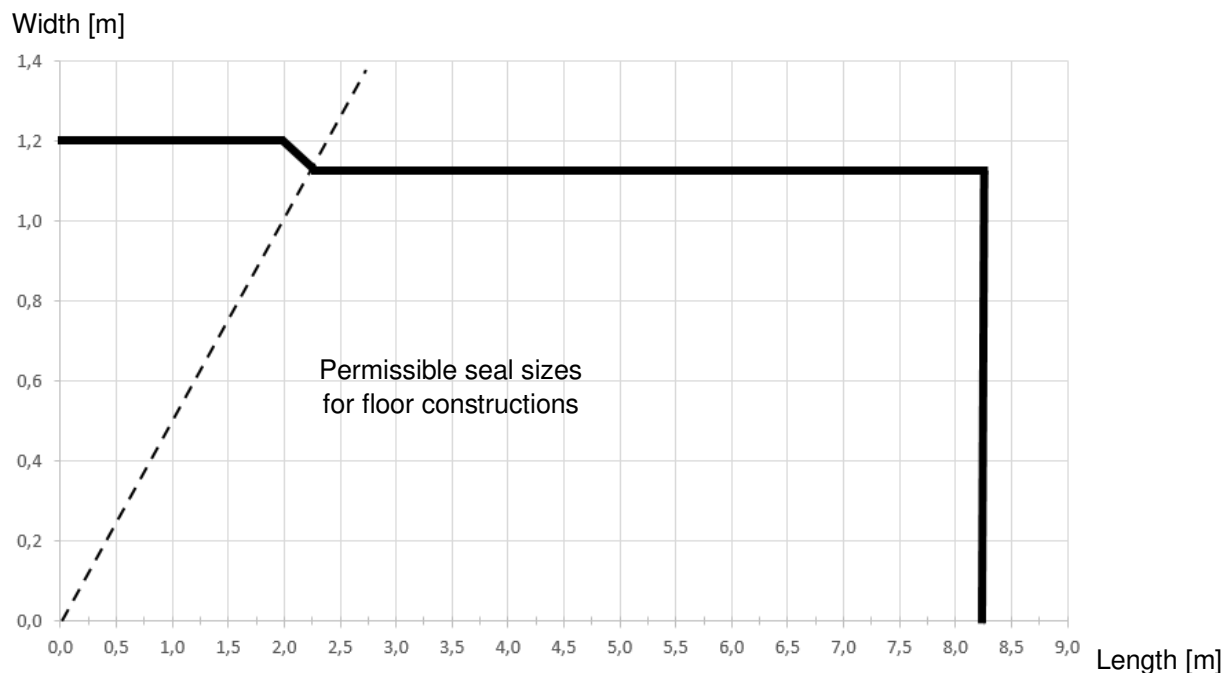
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking

Issued in Copenhagen on 2023-05-26 by



Thomas Bruun
Managing Director, ETA-Danmark

Maximum permissible seal size floor application



For floor constructions, according to H.8.8 of EN 1366-3, classifications apply to any penetration seal length as long as the width is reduced to an extent so that the perimeter length to seal area ratio is not smaller than that tested (see figure for permissible seal sizes). For floor constructions with length $\geq 2000 \text{ mm} \leq 8250 \text{ mm}$, maximum permissible seal width is 1125 mm.

Classifications are valid for any penetration seal equal to or smaller than that tested (height/length \leq tested and width \leq tested), i.e. in floors with or without services 1200 x 2000 mm (w x l) respectively 1125 x 8250 mm (w x l).

Permitted distances

Wall:

Other penetration seals: $\geq 200 \text{ mm}$, provided that one or both of the adjacent openings is larger than 400 mm x 400 mm, otherwise $\geq 100 \text{ mm}$. Other openings or installations: $\geq 200 \text{ mm}$, provided

that one or both of the adjacent openings is larger than 200 mm x 200 mm, otherwise $\geq 100 \text{ mm}$.

Services shall

be supported at maximum 250 mm from both faces of the wall.

Floor:

Other penetration seals: $\geq 200 \text{ mm}$, provided that one or both of the adjacent openings is larger than 400 mm x 400 mm, otherwise $\geq 100 \text{ mm}$. Other openings or installations: $\geq 200 \text{ mm}$, provided

that one or both of the adjacent openings is larger than 200 mm x 200 mm, otherwise $\geq 100 \text{ mm}$.

Services shall

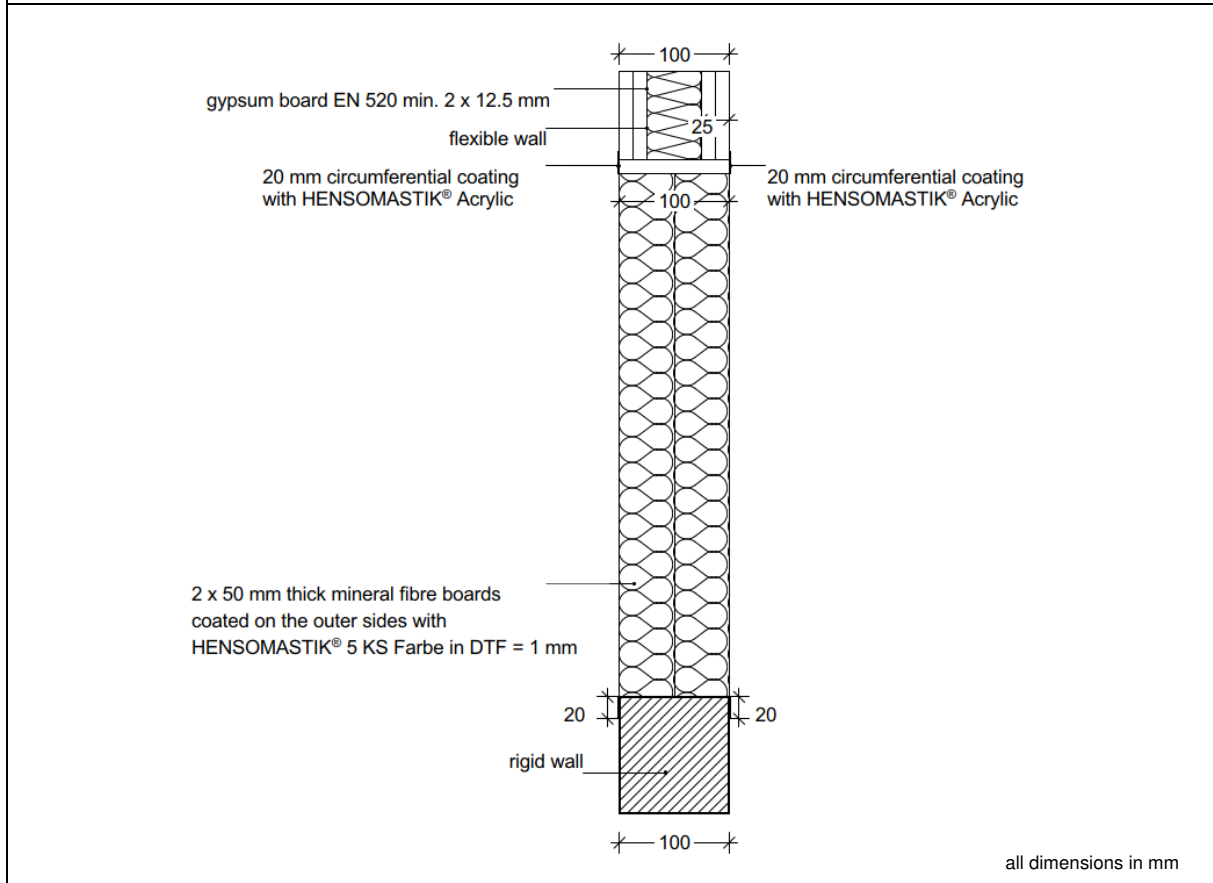
be supported at maximum 250 mm from the top side of the floor

A.1. Construction details: Wall application

Construction details: HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables comprising two ≥ 50 mm thick Rockwool Hardrock 040 mineral fibre boards ≥ 150 kg/m³ installed at joint and coated on the external faces with HENSOMASTIK® 5 KS Farbe or HENSOMASTIK® 5 KS viskos in dry film thickness ≥ 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 ≥ 1 mm) is applied from both sides of the wall by smoothing out the excess material with a spatula or putty knife.

Maximum permissible seal size 600 mm x 600 mm.



A.1.1. Wall application

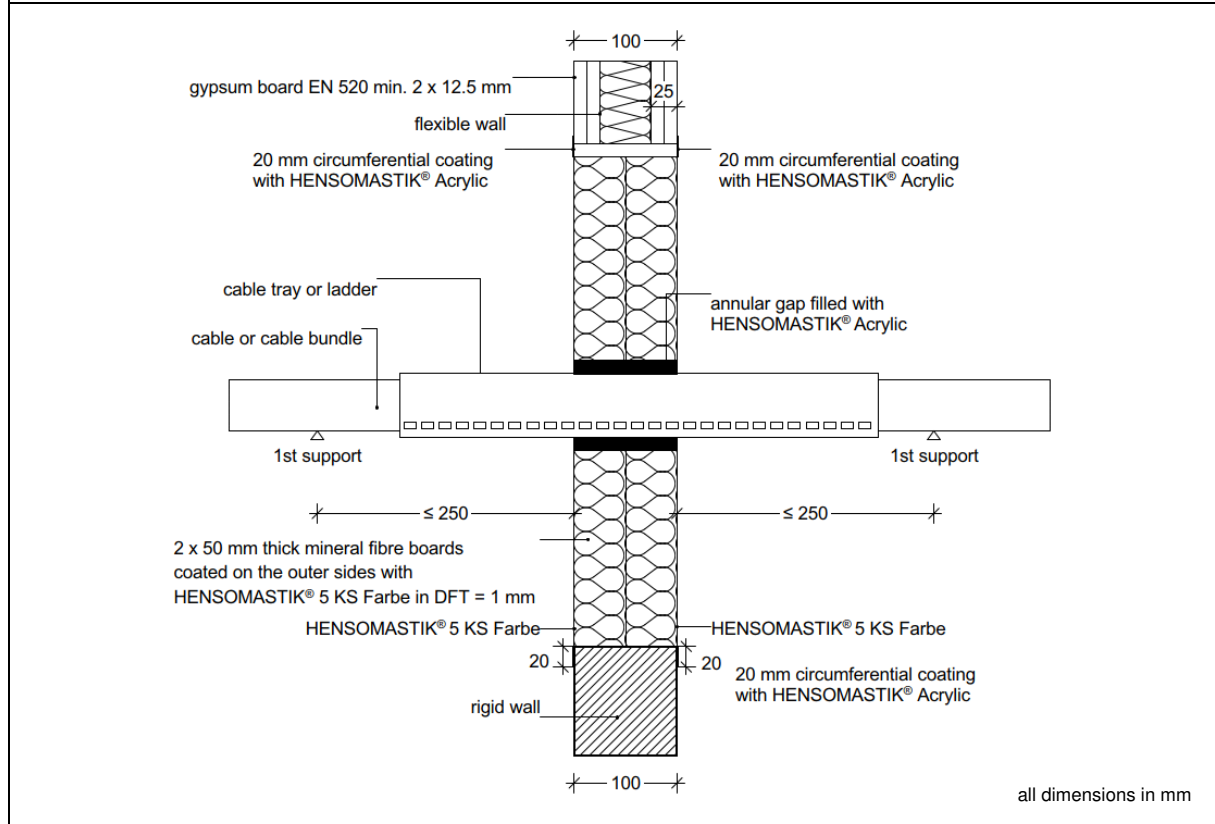
Services	Classification
No penetrating services	EI 90

A.2. Construction details: Cable bundles, electrical installation conduits or cable trays

Construction details: 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.

Maximum permissible seal size 600 mm x 600 mm.



A.2.1. Cable bundles, electrical installation conduits or cable trays

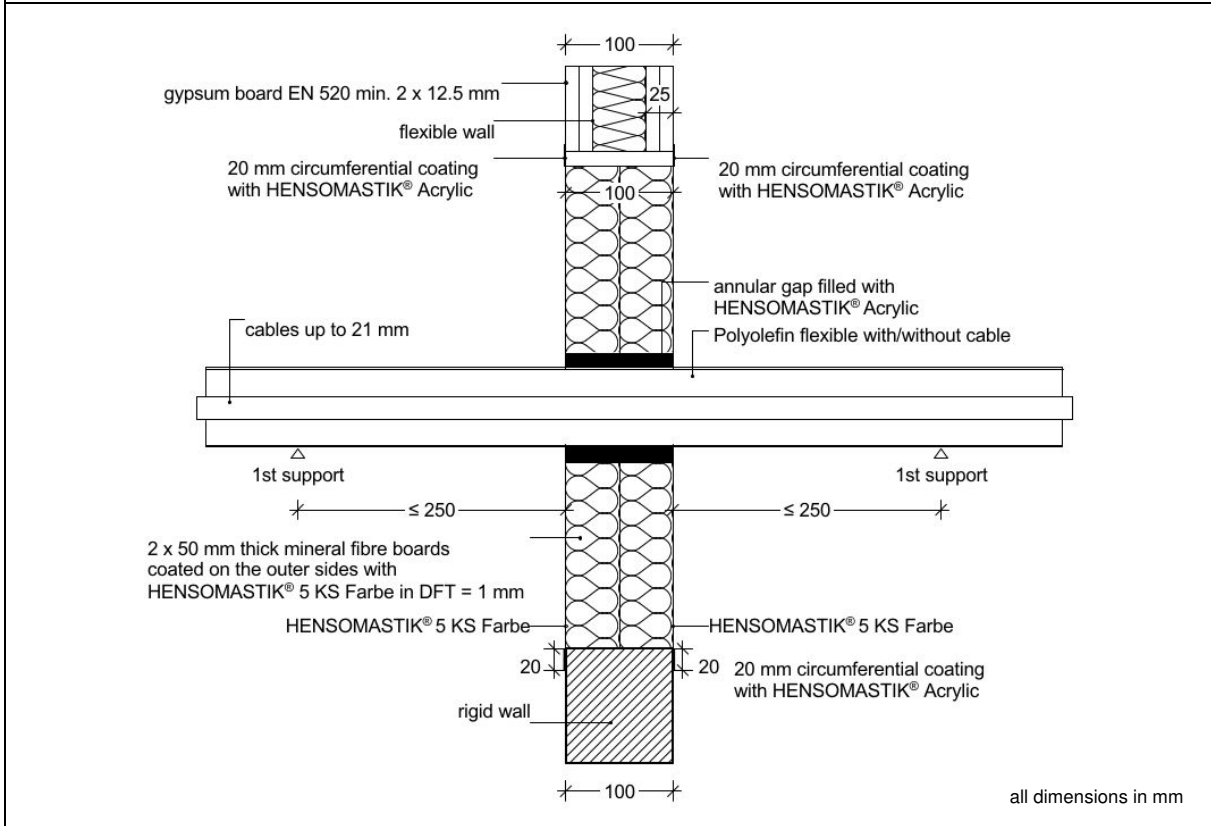
Services	Max. diameter bundle [mm]	Max. diameter single cable conduit [mm]	Max. diameter single cable [mm]	Classification
Sheathed cables of all types, single or in a bundle	100	-	21	EI 90
Telecommunication cables, single or in a bundle	100	-	21	EI 90
Aluminium cable type NAYY4x16RE, single	-	-	23	EI 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

A.3. Construction details: Cable conduits with or without cables

Construction details: 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.

Maximum permissible seal size 600 mm x 600 mm.



A.3.1. With or without cables

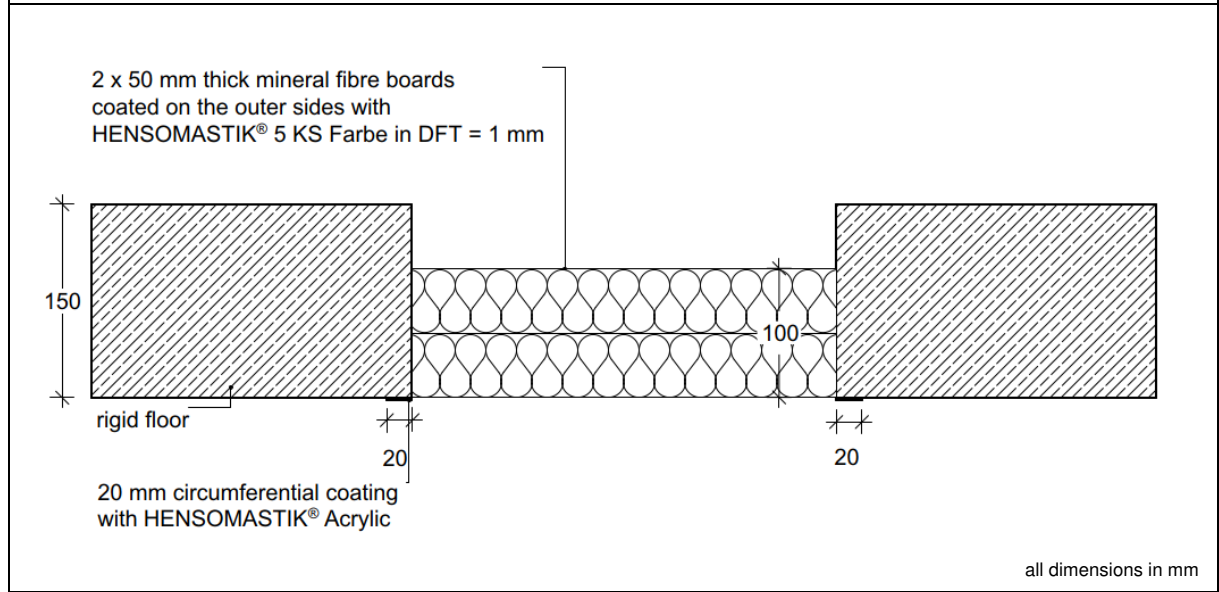
Services	Max. diameter single cable conduit [mm]	Max. diameter single cable [mm]	Classification
Polyolefin flexible cable conduits without cables	32	-	EI 60 C/C
Polyolefin flexible cable conduits with sheathed cables of all types, single	32	21	EI 60 C/C
Polyolefin flexible cable conduits with B cable,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

B.1. Construction details: Floor application

Construction details: HENSOMASTIK® Acrylic Penetration Seal 2 x 50 mm for Cables comprising two ≥ 50 mm thick Rockwool Hardrock 040 mineral fibre boards ≥ 150 kg/m³ 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 ≥ 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 ≥ 1 mm) is applied by smoothing out the excess material with a spatula or putty knife.

Maximum permissible seal size 1200 mm x 2000 mm or 1125 mm x 8250 mm.



B.1.1. Floor application

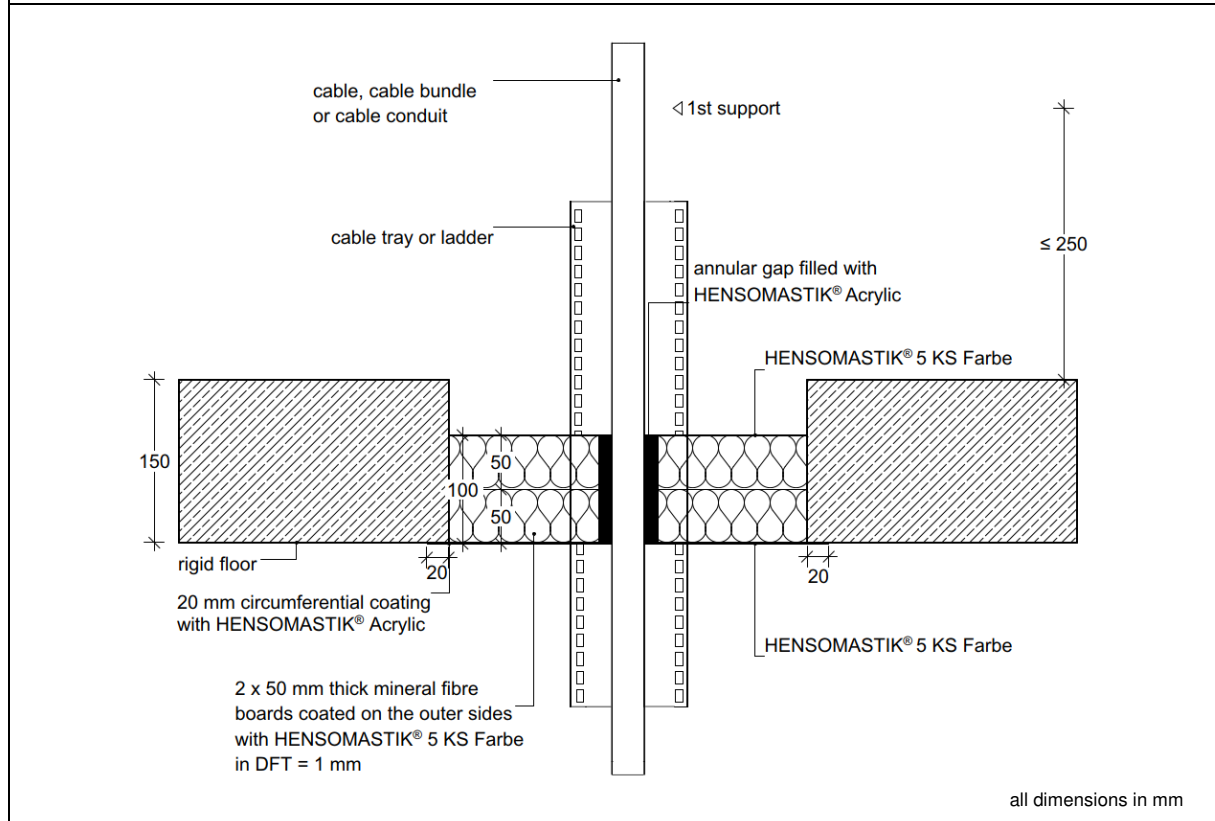
Services	Classification
No penetrating services	EI 90

B.2. Construction details: Cable bundles, electrical installation conduits or cable trays

Construction details: 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 with HENSOMASTIK® Acrylic in full depth.

Maximum permissible seal size 1200 mm x 2000 mm or 1125 mm x 8250 mm.



B.2.1. Cable bundles, electrical installation conduits or cable trays

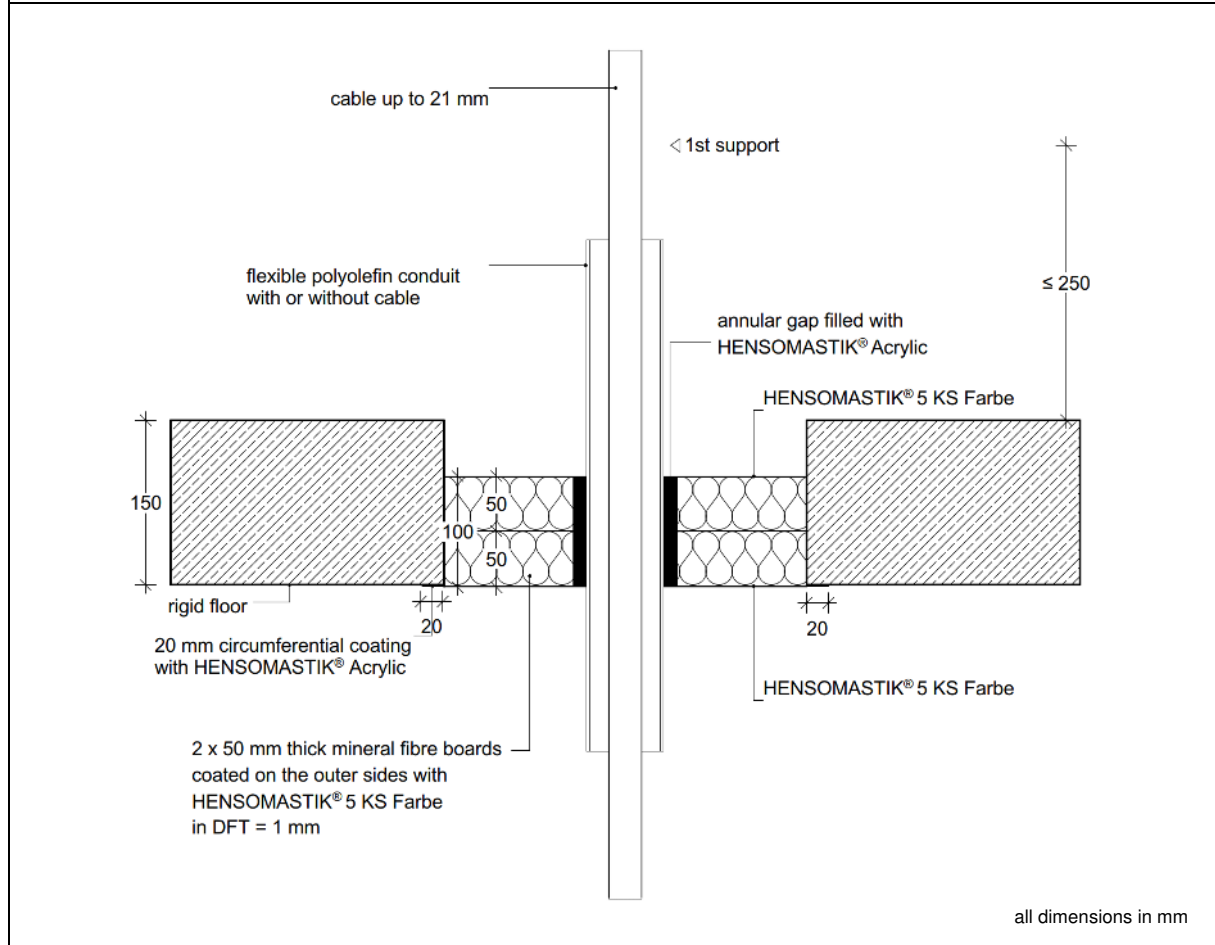
Services	Max. diameter bundle [mm]	Max. diameter single cable conduit [mm]	Max. diameter single cable [mm]	Classification
Sheathed cables of all types, single or in a bundle	100	-	21	EI 60
Telecommunication cables, single or in a bundle	100	-	21	EI 60
Aluminium cable type NAYY4x16RE, single	-	-	23	EI 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

B.3. Construction details: Flexible cable conduits with or without cables

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

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

Maximum permissible seal size 1200 mm x 2000 mm or 1125 mm x 8250 mm.



B.3.1. Flexible cable conduits with or without cables

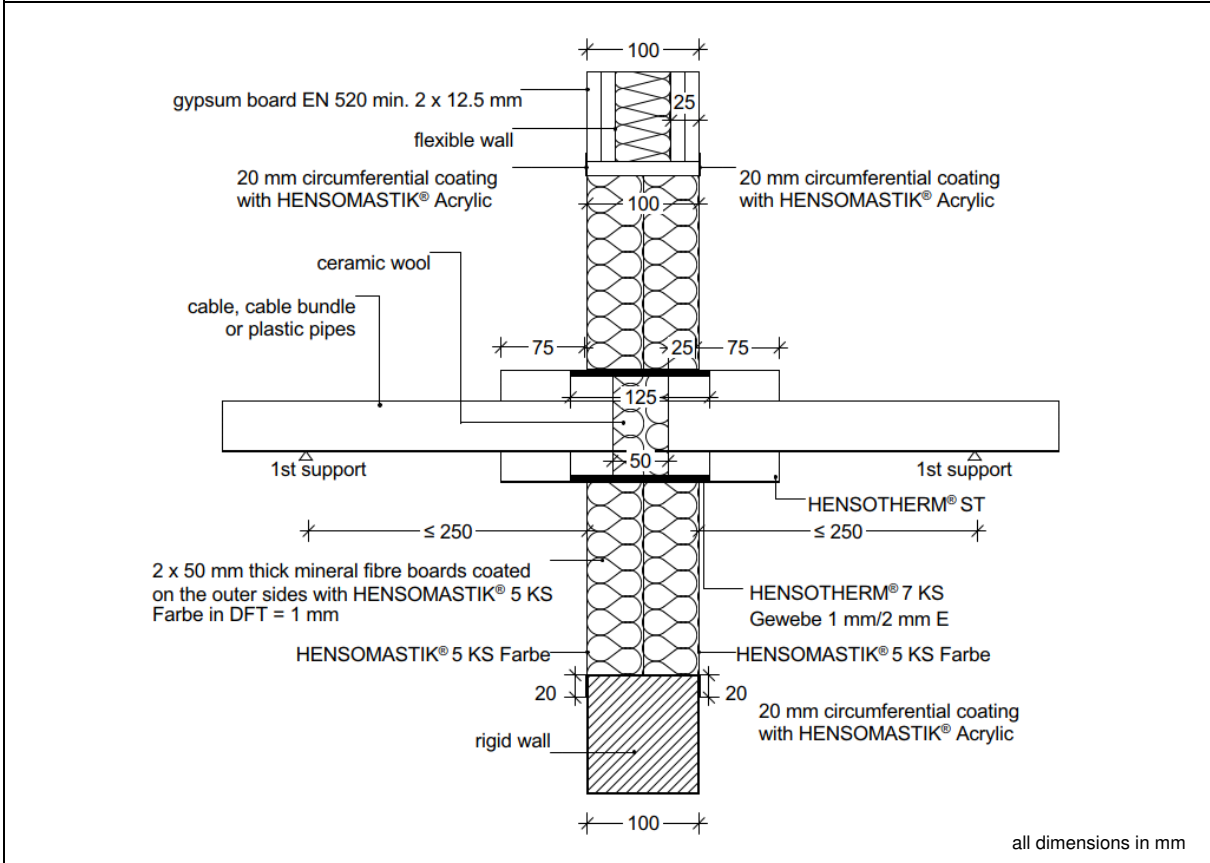
Services	Max. diameter single cable conduit [mm]	Max. diameter single cable [mm]	Classification
Polyolefin flexible cable conduits without cables	32	-	EI 120 C/C
Polyolefin flexible cable conduits with A1, A2, A3 or F cables	32	21	EI 120 C/C
Polyolefin flexible cable conduits with sheathed cables of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

C.1. Construction details, Cable bundles or EIP led through a HENSOTHERM® Service Transit

Construction details: 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.

Max. permissible seal size 1200 mm x 2000 mm.



C.1.1. 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 ≤ 32 mm without cables	EI 120	n. a.	n. a.
PVC pipes ≤ 32 mm with sheathed cables of all types ≤ 21 mm, single or in a bundle	EI 120	n. a.	n. a.
PVC pipes ≤ 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

