

HENSOTHERM[®] 7 KS viskos

Technical Datasheet / installation instructions

Intumescent annular gap seal for single pipes / cables, cable bundles, and EIP/flexible pipes

- Fire resistance class up to EI 240 / tested in accordance with EN 1366-3
- For use in flexible walls, solid walls, and solid floors
- EIP / flexible pipes, single and side by side with zero gap
- ETA 20/1306 of 01/01/2021 | application for general type approval (aBG) submitted










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



TECHNICAL INFORMATION

Applications

Cables		max Ø [mm]
	Cables	≤ 80.0
	Cable bundles	≤ 50.0
	EIP / flexible pipes single	≤ 50.0
	EIP / flexible pipes side by side	≤ 40.0
	Combustible pipes	≤ 110.0
	Composite aluminium pipes	≤ 63.0
	Incombustible pipes with synthetic rubber insulation	≤ 139.7 [steel] ≤ 42.0 [copper]

Advantages

- Fire resistance class up to EI 240
- Custom installations, also without mineral wool
- Wide range of applications (piping / cabling)
- Fast installation / low-cost solution
- Single and small penetration seals for cables, EIP / flexible pipes
- Tested as small penetration seal on cable Øs up to 68.0 mm
- EIP / flexible pipes, single or side by side with zero gap
- Fire protection acrylic overcoatable

Technical details

Assessment / ETA	ETA 18/0417, application for general type approval (aBG) submitted
Tested in accordance with	DIN EN 1366-3
Fire resistance time	Up to EI 240
Substrate	Flexible wall, solid wall, solid floor
Minimum component thickness	In flexible and solid walls: ≥ 100.0 mm In floors: ≥ 150.0 mm
Max aperture size	Wide range of applications See tables for details
Annular gap seal	HENSOTHERM® 7 KS viskos

Product details

Density:	approx 1.3g/cm ³
Application temperature:	+5°C to +40°C
Temperature resistance:	-40°C to +140°C
Drying time:	1 mm / 1 day
Initial foaming:	from approx +150°C
Max total deformation:	10%
DIN 4102 P1 building material class:	B2
Shelf life (at +20°C in dry environment):	12 months
Storage and transport temperature:	+5°C to +30°C
VOC according to LEED:	< 1 g/l
Application temperature range:	+5°C to +40°C
Overcoatability:	Yes

Distances

Spacings for single-pipe penetrations (ETA 20/1306 of 1/1/2021 on page 30):	
• Distance from other penetrations:	≥ 200 mm
• Distance of first suspension:	≤ 300 mm
Spacings in small penetration seal (ETA 20/1306 of 1/1/2021 on page 39):	
• Distance from other penetrations:	≥ 200 mm
• Distance of first suspension:	≤ 300 mm

Product	EAN	Packaging
HENSOTHERM® 7 KS viskos	4250153511014	310 ml cartridge, 20 x cartridge = 1 carton
	4250153511038	600 ml tubular bag, 12 x tube

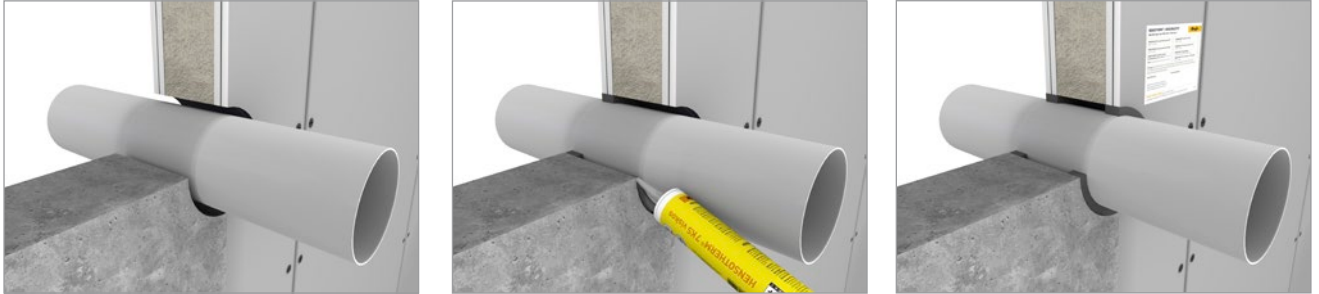


TECHNICAL INFORMATION

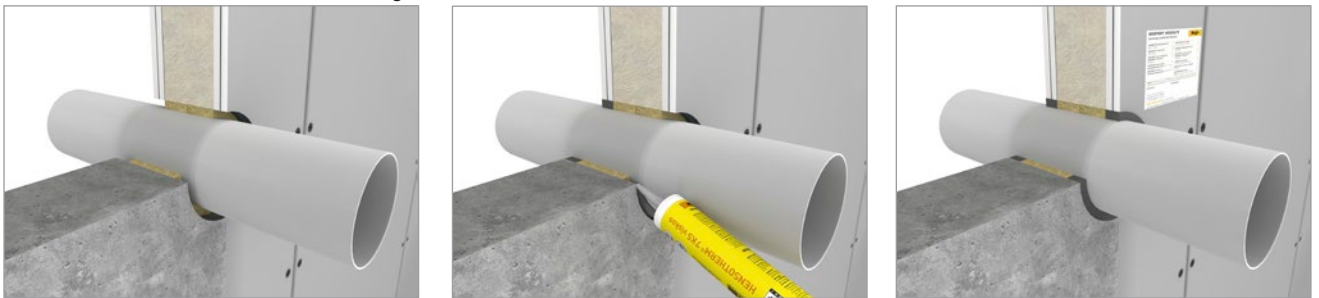
Field of application: Flexible or solid wall | Combustible pipes

Installation instructions: Installing combustible pipes in a flexible or solid wall may first involve stuffing the annular gap with mineral wool (see tables!). The annular gap is sealed from both sides with **HENSOTHERM® 7 KS viskos** to a **depth of 25 mm**. Annular gap width as listed in the following tables.

Variant 1 (V1) | without mineral wool stuffing



Variant 2 (V2) | with mineral wool stuffing



Pipe (manufacturer, type)	Pipe diameter (mm)	Wall thickness (mm)	Annular gap width (mm)	Classification
PVC-U	≤ 20	1.5–2.3	10 (V2)	EI 90 U/U
	≤ 50	1.8	10 (V2)	EI 90 U/U
	≤ 50	1.8–5.6	10 (V2)	EI 60 U/U
	≤ 50	1.8–5.6	10 (V1)	EI 120 U/U
	≤ 110	2.2–8.1	15 (V2)	EI 60 U/U
PE 100	≤ 20	2.0	10 (V2)	EI 90 U/U
	≤ 50	2.9–4.6	10 (V1)	EI 120 U/U
	≤ 110	3.4–6.6	10 (V2)	EI 60 U/U
PP HAT	≤ 20	1.9–2.8	10 (V2)	EI 90 U/U
	≤ 50	2.9–4.6	10 (V1)	EI 120 U/U
POLO-KAL NG	≤ 50	2.0	10 (V1)	EI 120 U/U
POLO-KAL XS	≤ 50	2.0	10 (V1)	EI 120 U/U
Geberit Silent-Pro	≤ 50	3.0	10 (V1)	EI 120 U/U
Geberit Mepla	≤ 16	2.0	10 (V2)	EI 60 U/C
	≤ 40	3.5	10 (V2)	EI 60 U/C
Rehau Raupiano	≤ 50	1.8	10 (V1)	EI 120 U/U
Pipelife Master 3	≤ 50	1.8	10 (V1)	EI 120 U/U
Wavin SiTech+	≤ 50	1.8	10 (V1)	EI 120 U/U

(V1) = without mineral wool stuffing | (V2) = with mineral wool stuffing

TECHNICAL INFORMATION

Field of application: Flexible or solid wall | Incombustible pipes with synthetic rubber

Installation instructions: Installing incombustible pipes with synthetic rubber insulation (fire index number $\geq D-s3, d0$) in a flexible or solid wall may first involve stuffing the annular gap with mineral wool (see tables!). Afterwards **HENSOTHERM® 7 KS viskos** is introduced from **both sides** into the annular gap (note annular gap width in table!), to a **depth on each side of 25 mm**.

Variant 1 (V1) | without mineral wool stuffing



Variant 2 (V2) | with mineral wool stuffing



Incombustible pipes with unbroken (CS) synthetic rubber insulation, fire index number $\geq D-s3, d0$


Pipe (manufacturer, type)	Pipe diameter (mm)	Wall thickness (mm)	Insulation thickness (mm)	Annular gap width (mm)	Classification
Copper, steel	≤ 15	1.0 – 7.5	≤ 10	10 (V1)	EI 120 C/U
	$> 15 \leq 14.2$	1.5 – 14.2	≤ 13	10 (V1)	EI 120 C/U
	≤ 15	1.0 – 7.5	≤ 10	10 (V2)	EI 90 C/U
	15 – 42	1.2 – 14.2	≤ 13	10 (V2)	EI 90 C/U
	15 – 42	1.2 – 14.2	13 – 25	10 (V2)	EI 60 C/U
Steel	42 – 88.9	3.2 – 14.2	≤ 19	10 (V2)	EI 60 C/U
	88.9 – 139.7	3.2 – 14.2	19 – 50	10 (V2)	EI 30 C/U

(V1) = without mineral wool stuffing | (V2) = with mineral wool stuffing

List of approved insulation types:

The following insulation types exhibit a fire behaviour better than or equivalent to those tested (reference D,s3-d0) and hence may be used as an alternative in the same tested/specified thicknesses (as of December 2020):

Armaflex AF	Eurobatex	Flexen Heizungskautschuk Plus	Kaiflex HFplus s2	K-Flec ST AD
Armaflex HT	Eurobatex H	Flexen Kältekautschuk Plus	Kaiflex HTplus	K-Flex ECO AD
Armaflex LS	Eurobatex HF		Kaiflex KKplus s2	K-Flex H Duct
Armaflex NH	Eurobatex Plus		Kaiflex LS	K-Flex SRC ECO
Armaflex SH	Eurobatex Plus UF		Kaiflex ST	K-Flex St SK
Armaflex Ultima	Eurobatex Super			
Armaflex XG				

 In Switzerland, the insulation selected must have the corresponding fire index number.

TECHNICAL INFORMATION

Field of application: Flexible or solid wall | Cabling and EIP / flexible pipes in small penetration seal (circular and square)

Installation instructions: Installing EIP / flexible pipes with and without cabling in a flexible or solid wall involves sealing the annular gap from both sides with **HENSOTHERM® 7 KS viskos** to a **depth of 25 mm**. Annular gap width as listed in the following tables.

TIP: Easily made with 68mm core drill bit.



Conduit (type)	Penetration size (mm)	Max diameter of EIP / flexible pipe (mm)	Max diameter of single cable (mm)	Annular gap size (mm)	Classification
EIP / flexible pipe without cable	68 x 68	50	-	0-36	EI 120 U/C
EIP / flexible pipe with single or cable bundles	68 x 68	50	21	0-36	EI 90 U/C

Field of application: Flexible or solid wall | Cabling / bundled cabling in small penetration seal (circular and square)

Installation instructions: Installing cables / cable bundles in a flexible or solid wall involves sealing the annular gap from both sides with **HENSOTHERM® 7 KS viskos** to a **depth of 25 mm**. Annular gap width as listed in the following tables.

TIP: Easily made with 68mm core drill bit.



Cables / cable bundles in small penetration seal, circular and square (positive test findings, to be adopted in the ETA following the next revision)

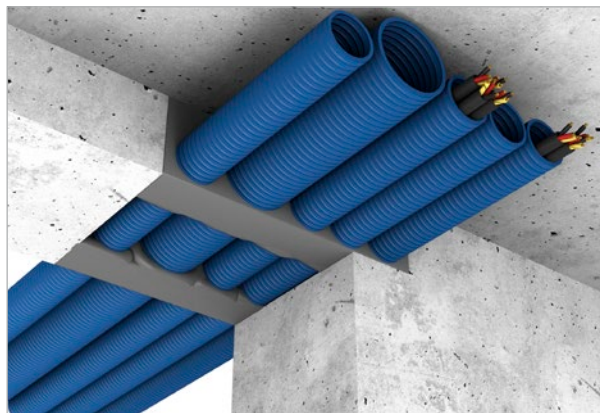
Conduit (type)	Max penetration size (mm)	Max diameter of EIP / flexible pipe (mm)	Max diameter of single cable (mm)	Annular gap size (mm)	Classification
Sheathed electrical cabling, single / bundled	68 x 68	50	21	0-36	EI 120 U/C
Sheathed electrical cable (single line)	100 x 100	-	≤ 80	10	up to EI 120

TECHNICAL INFORMATION

Field of application: Solid wall | EIP / flexible pipes side by side with zero gap (ETA page 40)

Installation instructions: Installing EIP / flexible pipes side by side with and without cabling in a solid wall (note max penetration size in table!) involves sealing the annular gap from both sides with **HENSOTHERM® 7 KS viskos** to a **depth of 25 mm**.

Annular gap width as listed in the following tables.

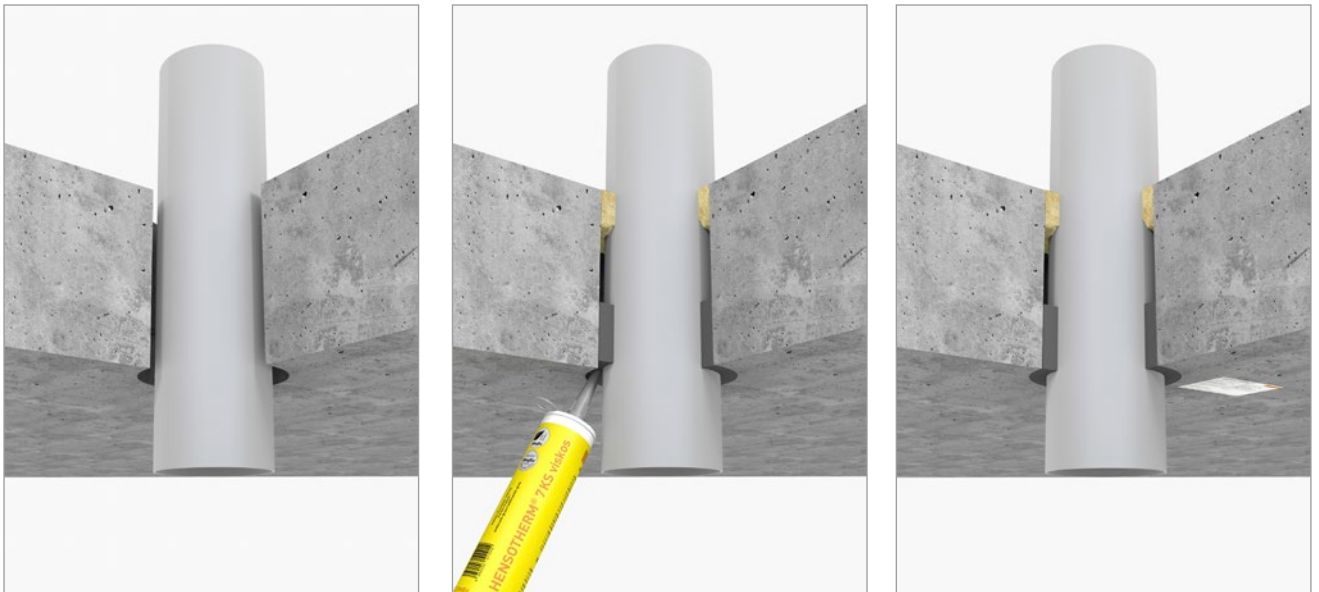


Conduit (type)	Max penetration size (mm)	Max diameter of EIP / flexible pipe (mm)	Max diameter of single cable (mm)	Annular gap size (mm)	Classification
EIP / flexible pipes (single or side by side with zero gap, without cabling)	35 x 135	25	-	0-10	EI240 U/C
	50 x 210	40	-	0-10	EI180 U/C
EIP / flexible pipes (single or side by side with zero gap, with single or cable bundles)	30 x 135	20	14.4	0-10	EI240 U/C
	35 x 135	25	21	0-10	EI180 U/C
	50 x 210	40	21	0-10	EI180 U/C

TECHNICAL INFORMATION

Field of application: Floor | Combustible pipes

Installation instructions: Installing combustible pipes involves stuffing the annular gap with **HENSOTHERM® 7 KS viskos** introduced from below to a **depth of 50 mm**. From above, the annular gap is stuffed with mineral wool to a depth of 25 mm. Annular gap width as listed in the following tables.

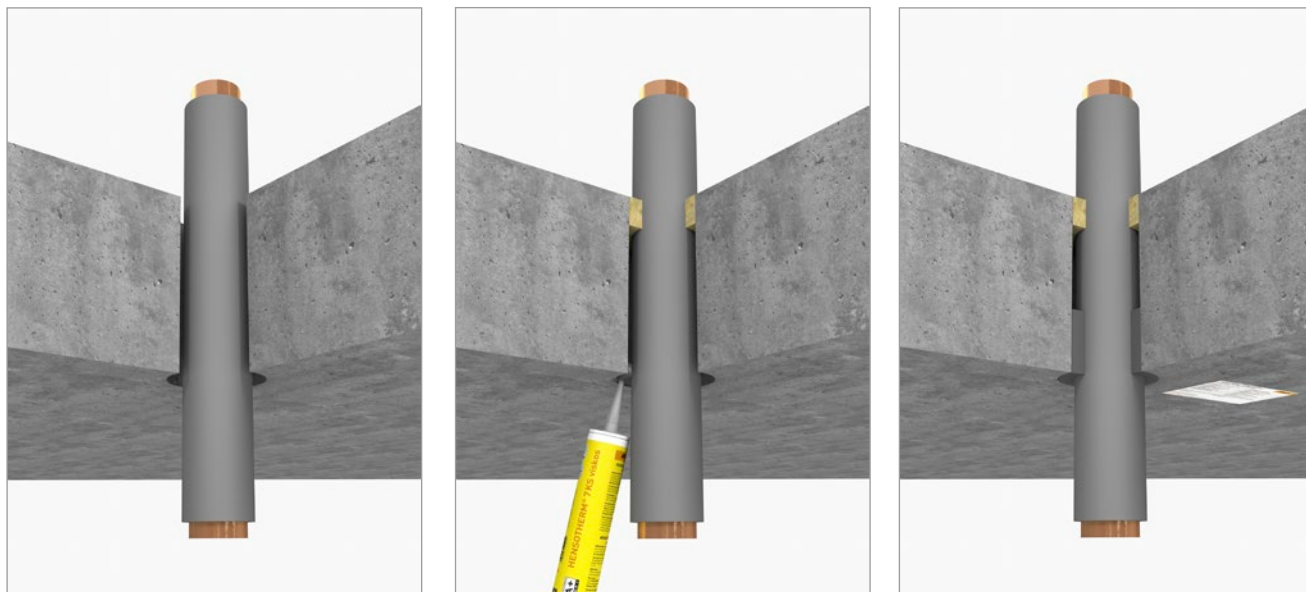


Pipe (manufacturer, type)	Pipe diameter (mm)	Wall thickness (mm)	Annular gap width (mm)	Classification
PVC-U	≤ 50	1.8–5.6	10	EI240 U/U
PE 100	≤ 50	2.9–4.6	10	EI240 U/U
PP-HT	≤ 50	2.9–4.6	10	EI240 U/U
Geberit Silent-PP	≤ 50	1.8	10	EI240 U/U
Geberit Silent-Pro	≤ 50	3.0	10	EI240 U/U
POLO-KAL NG	≤ 50	2.0	10	EI240 U/U
POLO-KAL XS	≤ 50	2.0	10	EI240 U/U
Rehau Raupiano	≤ 50	1.8	10	EI240 U/U
Pipelife Master 3	≤ 50	1.8	10	EI240 U/U
Wavin SiTech+	≤ 50	1.8	10	EI240 U/U

TECHNICAL INFORMATION

Field of application: Floor | Incombustible pipes

Installation instructions: Installing incombustible pipes with synthetic rubber insulation (fire index number \geq D-s3, d0) involves stuffing the annular gap (note annular gap width in the table!) with **HENSOTHERM® 7 KS viskos** introduced from below to a **depth of 50 mm**. From above, the annular gap is stuffed with mineral wool to a depth of 25 mm. Annular gap width as listed in the following tables.



Incombustible pipes with unbroken (CS) synthetic rubber insulation, fire index number \geq D-s3, d0)

Pipe (manufacturer, type)	Pipe diameter (mm)	Wall thickness (mm)	Insulation thickness (mm)	Annular gap width (mm)	Classification
Copper, steel	≤ 15	1.0–7.5	≤ 10	10	EI 90 C/U
Copper, steel	42	1.2–14.2	≤ 13	10	EI 120 C/U
Copper, steel	15–42	1.2–14.2	≤ 13	10	EI 90 C/U
Copper, steel	15–42	1.2–14.2	13–25	10	EI 60 C/U

List of approved insulation types:

The following insulation types exhibit a fire behaviour better than or equivalent to those tested (reference D,s3-d0) and hence may be used as an alternative in the same tested/specified thicknesses (as of December 2020):

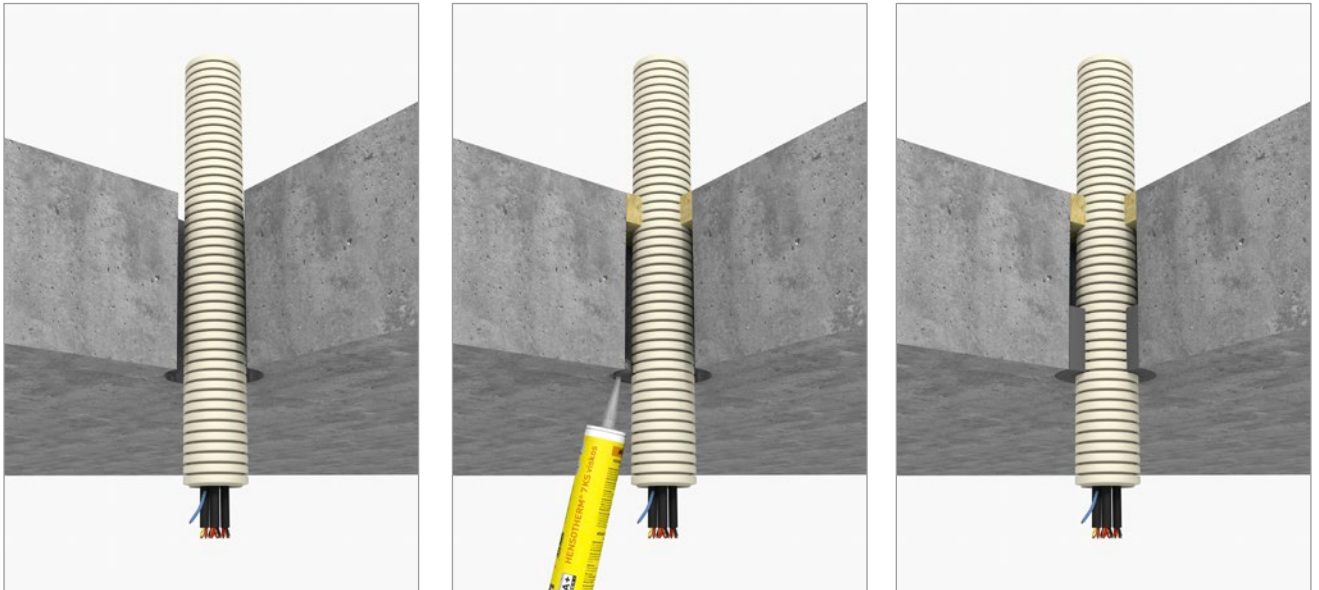
Armaflex AF	Eurobatex	Flexen Heizungskautschuk Plus	Kaiflex HFplus s2	K-Flec ST AD
Armaflex HT	Eurobatex H	Flexen Kältekautschuk Plus	Kaiflex HTplus	K-Flex ECO AD
Armaflex LS	Eurobatex HF		Kaiflex KKplus s2	K-Flex H Duct
Armaflex NH	Eurobatex Plus		Kaiflex LS	K-Flex SRC ECO
Armaflex SH	Eurobatex Plus UF		Kaiflex ST	K-Flex St SK
Armaflex Ultima	Eurobatex Super			
Armaflex XG				

+ In Switzerland, the insulation selected must have the corresponding fire index number.

TECHNICAL INFORMATION

Field of application: Floor | EIP / flexible pipes

Installation instructions: Installing EIP / flexible pipes and single and cable bundles involves stuffing the annular gap (note annular gap width in the table!) with **HENSOTHERM® 7 KS viskos** introduced from below to a **depth of 50 mm**. From above, the annular gap is stuffed with mineral wool to a depth of 25 mm. Annular gap width as listed in the following tables.



EIP / flexible pipes

Conduit (type)	Max penetration size (mm)	Max diameter of EIP / flexible pipe (mm)	Max diameter of single cable (mm)	Annular gap size (mm)	Classification
EIP / flexible pipe without cable	Ø 70	50	-	1 – 20	EI 240 U/C
EIP / flexible pipe with single or cable bundles	Ø 70	50	21	1 – 20	EI 180 U/C

Single and bundled cabling

Conduit (type)	Max penetration size (mm)	Max diameter of single cable (mm)	Annular gap size (mm)	Classification
Single cable	Ø 60	21	1 – 20	EI 120
Single cable	Ø 70	50	10	EI 90
Single cable	Ø 100	80	10	EI 60
Cable bundles	Ø 90	21	1 – 20	EI 120

TECHNICAL INFORMATION

Notes

Retrofits

If the sealing system is designed for retrofits, note the following:

Following a retrofit, the system must be returned to its intended state.

The specifications in the aBG / ETA / installation instructions must be observed.

Use and inspection

The sealing system's fire protection properties are safeguarded over the service life only when the system is maintained in proper working condition.

The developer / principal must be referred thereto by the applicator / commissioned company.

Disposal

The materials must be handled like waste paints and varnishes. The applicable national laws and regulations must be observed.

Labelling (D/CH)

Following their installation, the sealing systems must be marked with the provided permanent labels affixed to the wall / floor.

NOTES

A large grid of small dots, intended for taking notes. The grid consists of approximately 25 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

The information provided herein reflects the current state of our technical testing and experience with the use of this product. However, the buyer/user is hereby not relieved of their duty, at their own responsibility, to properly examine our materials for their suitability for the intended use based on the respective site conditions. Legal claims for damages arising from the use of this product for purposes other than, or in a manner that differs from, the description contained herein without our prior written approval are precluded and may not be asserted against us. In light of the circumstance that we have no influence over site conditions and various factors that could influence the performance and use of our product, a guarantee of results or liability, regardless of legal grounds, cannot be derived from this information or from verbal consultation provided by one of our employees unless we may be accused of intent or gross negligence. Our General Terms and Conditions apply for all other purposes (www.rudolf-hensel.de/agb). The most recent version of our technical data sheet is valid and may be requested from the Rudolf Hensel GmbH or downloaded at www.rudolf-hensel.de. © Rudolf Hensel GmbH



RUDOLF HENSEL GMBH

Lack- und Farbenfabrik

Lauenburger Landstraße 11
21039 Börnsen | Germany

Tel. +49 40 72 10 62-10
Fax +49 40 72 10 62-52

Email: kontakt@rudolf-hensel.de
Internet: www.rudolf-hensel.de

Extensions:
Orders: -40

Technical advice / sales
D/A/CH: -44, international: -48

