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designated according to Article 29 of the Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment, www.eota.eu)

European Technical Assessment

ETA 18/0731
of 14/01/2019

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: UL International (UK) Ltd

Trade name of the construction product HENSOTHERM® System für Schachtwand

Product family to which the construction product belongs

Fire Stopping and Sealing Product:
 • Penetration Seals

Manufacturer

RUDOLF HENSEL GMBH
 Lauenburger Landstr.11
 Börnsen 21039
 Germany

Manufacturing plant(s)

RUDOLF HENSEL GMBH
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This European Technical Assessment contains

11 pages including 1 Annex which forms an integral part of this assessment.

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

EAD 350454-00-1104, September 2017

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SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

- 1) HENSOTHERM® System für Schachtwand is a sealant, HENSOMASTIK® 7 KS viskos used to form a penetration seal around single multilayer pipes, composite pipes and conduits, in combination with HENSOTHERM® 7KS Gewebe pipe wraps (ETA 16/0369), to reinstate the fire resistance performance of shaftwall constructions, where they have been provided with apertures for the penetration of services.
- 2) HENSOMASTIK® 7 KS viskos, supplied in liquid form in cans, cartridges or tubes. HENSOTHERM® 7KS Gewebe pipe wraps (ETA 16/0369) are also incorporated into the penetration seal where required.
- 3) HENSOTHERM® System für Schachtwand contains no carcinogenic substances or mutagenic substances, flame retardants or antimicrobiological agents.
- 4) The applicant submitted a written declaration that HENSOTHERM® System für Schachtwand does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there. An emission report has also been provided.

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.

- 5) The use category of HENSOTHERM® System für Schachtwand in relation to BWR 3 (Hygiene, health and environment) is IA1, S/W3

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104

Detailed information and data is given in Annex A.

- 1) The intended use of HENSOTHERM® System für Schachtwand is to reinstate the fire resistance performance of flexible wall, rigid wall and rigid floor constructions where they are penetrated by pipes.
- 2) The specific elements of construction that the system HENSOTHERM® System für Schachtwand may be used to provide a penetration seal in, are as follows:
 - a. Shaft walls: The wall must have a minimum thickness of 90 mm and comprise min. steel studs lined on one face with minimum 2 layers of 20 mm thick boards.

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

- 3) The System HENSOTHERM® System für Schachtwand may be used to provide a penetration seal with pipes and conduits (for details see Annex A).
- 4) Services shall be supported at maximum 200 mm from both faces of the wall.

- 5) The provisions made in this European Technical Assessment are based on an assumed working life of the HENSOTHERM® System für Schachtwand of 10 years, provided that the conditions laid down in sections 4.2/5.1/5.2 for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.
- 6) Type X: Intended for uses in external conditions. Includes lower classes.

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

Product-type: Sealant		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
EN 1026	Air permeability	No performance determined
EAD 350454-00-1104, Annex C	Water permeability	No performance determined
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use categories: IA1, S/W3 Declaration of manufacturer
BWR 4 Safety in use		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact/movement	
EOTA TR 001:2003	Adhesion	
EAD 350454-00-1104, Clause 2.2.9	Durability	X
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
BWR 6 Energy economy and heat retention		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 14683, EN ISO 10211, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, see <http://eur-lex.europa.eu/JOIndex.do> of the European Commission¹, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

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

Tasks of the manufacturer:

Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this European technical Assessment.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this European Technical Assessment.

The factory production control shall be in accordance with the Control Plan of 2nd November 2018, which is part of the technical documentation of this European Technical Assessment. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (UK) Ltd.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

¹ Official Journal of the European Communities L178/52 of 14/7/1999

Other tasks of the manufacturer

Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

(a) Technical data sheet:

- Field of application:
- Building elements for which the linear joint seal or penetration seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the joint or penetration seal
- Construction of the linear joint seal or penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- Services which the penetration seal is suitable, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings (e.g. cable trays)

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

6 Issued on:

14th January 2019

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For and on behalf of UL International (UK) Ltd.

ANNEX A – Resistance to Fire Classification – HENSOTHERM® System für Schachtwand

A.1 Shaft wall constructions with wall thickness of minimum 90 mm

A.1.1 Service Types

Services	Types
Plastic conduits	NA
Composite pipes with Armaflex insulation	<ul style="list-style-type: none"> • KE KELIT KELOX • Geberit Mepla
Multilayer pipes	<ul style="list-style-type: none"> • Polokal XS • Polokal NG • Silent PP

A.1.2 Permitted Distances

a1: annular space = nominally 0 mm and any remaining space filled with plaster or HENSOTHERM® 7 KS viskos depending on pipe size
a2: Separation between seals ≥ 0 mm

Distance 1st support service ≤ 200 mm

Option 1

1 Supporting construction
a1 Pipe/Edge of seal separation (annular space)
a2 Separation between penetration seals

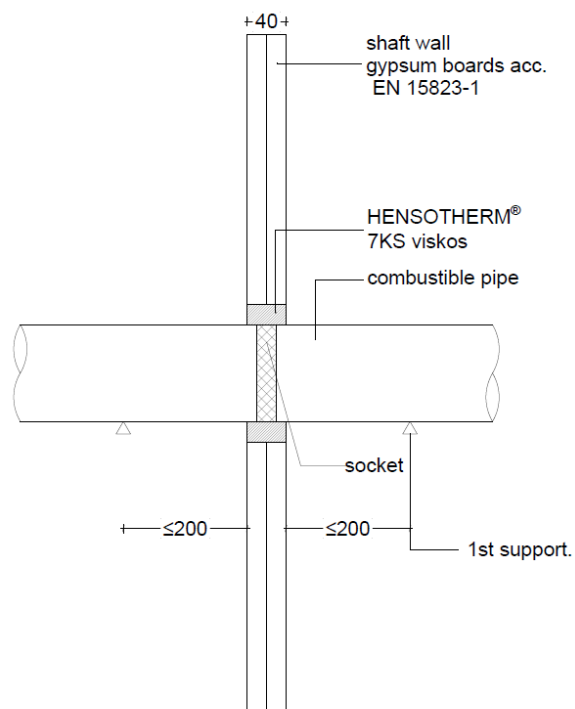
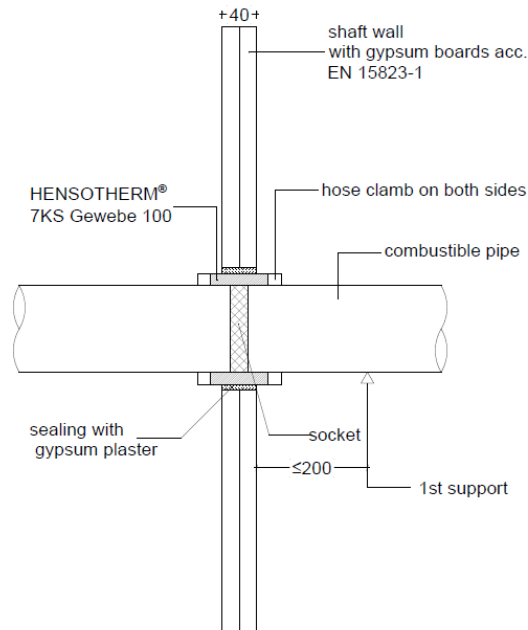
Option 2

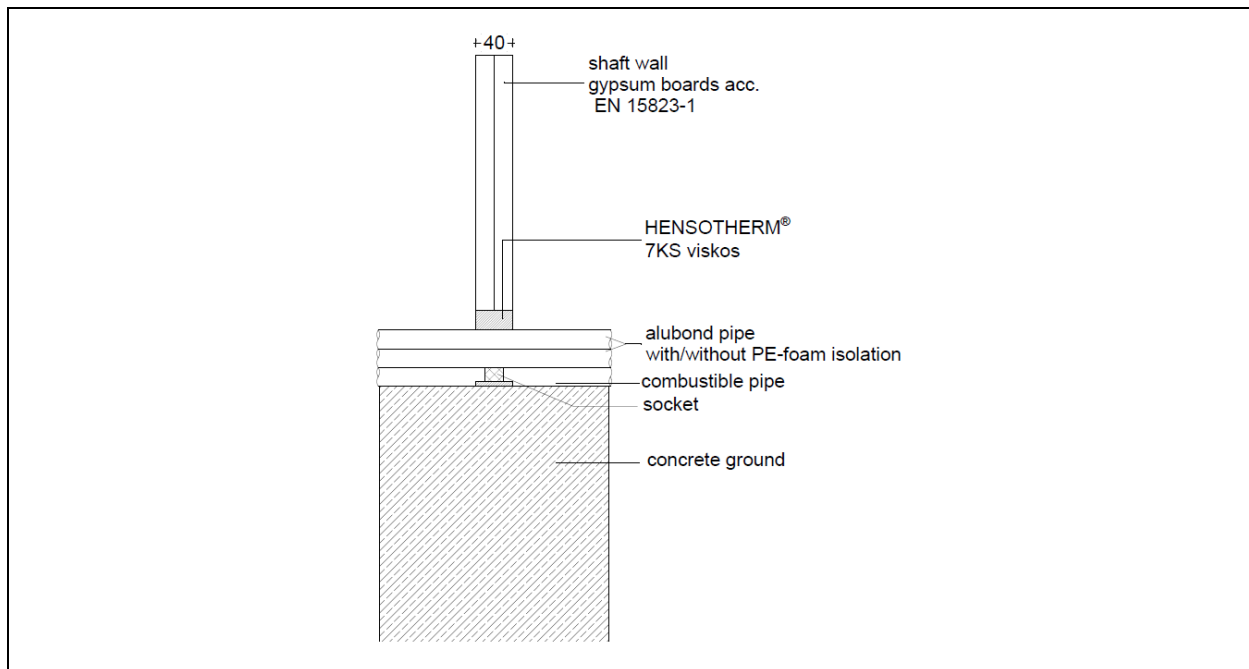
1 Supporting construction
a1 Pipe/Edge of seal separation (annular space)
a2 Separation between penetration seals

A.1.3 Single Pipes

Penetration Seal: Plastic and Alubond pipes installed with a pipe joint within the wall. Pipes ≥ 50 mm diameter sealed with 1 x lengths of HENSOTHERM® 7KS Gewebe 100 fitted central to the wall boards and fixed on both sides with steel hose clamps, and the annular gap infilled with Knauf Fireboard Spachtel. Pipes ≤ 50 mm diameter sealed with HENSOTHERM® 7KS viskos (full depth). Min. Separation between seals (a2) = 0 mm, annular space (a1) nominally 0 mm and any remaining space filled as described. Service may be installed at 0 mm distance to the floor.

Construction details:





A.1.3.1 Multilayer pipes

Pipes	Maximum Pipe diameter mm	Pipe wall thickness mm	Annular space mm	Layers of HENSOTHERM® 7 KS Gewebe 100 (1 mm)	Additional Components	Classification
Polokal NG	≤50	2.0	15	-	HENSOTHERM® 7 KS viskos	EI 90 U/U
	≤75	2.6	10-20	4	-	
	≤110	3.4	10-20	6	-	E 90 U/U EI 60 U/U
Polokal XS	≤50	2.0	15	-	HENSOTHERM® 7 KS viskos	EI 90 U/U
	≤75	2.6	10-20	4	-	
	≤110	3.4	10-20	6	-	
Silent PP	≤50	1.8	15	-	HENSOTHERM® 7 KS viskos	EI 90 U/U
	≤75	2.6	10-20	4	-	E 90 U/U EI 60 U/U
	≤110	3.6	10-20	6	-	EI 90 U/U

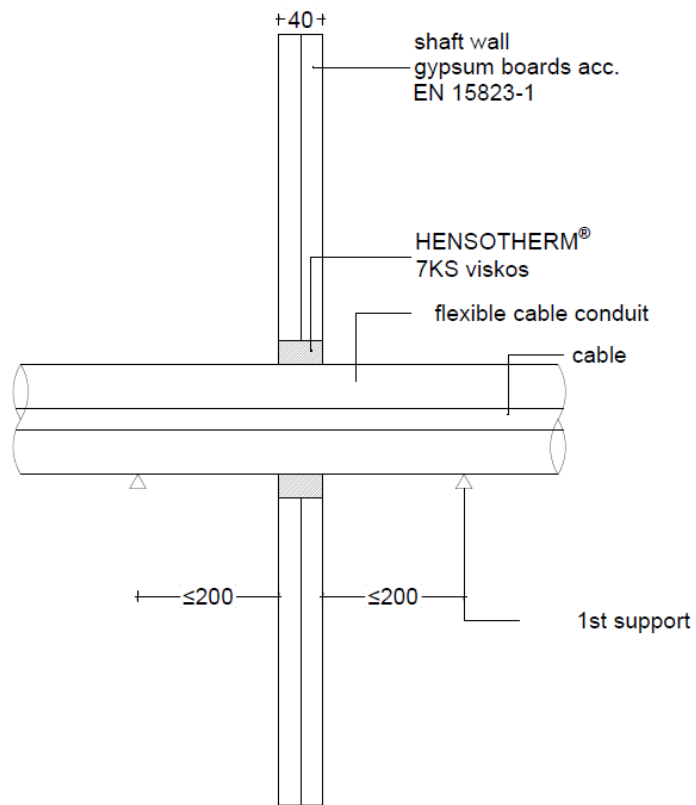
A.1.3.2 Composite pipes

Pipes	Maximum Pipe diameter mm	Pipe wall thickness mm	Annular space mm	Pipe insulation Continuous Sustained (CS)	Additional Components	Classification
Geberit Mepla	≤25	3.0	15	9 mm PE	HENSOTHERM® 7 KS viskos	EI 90 U/C
	≤25	3.0	15	None		
	≤32	3.0	15	None		
KEKELIT Kelox	≤25	2.5	15	9 mm PE	HENSOTHERM® 7 KS viskos	EI 90 U/C
	≤25	2.5	10-20	None		
	≤32	3.0	10-20	None		

A.1.4 Conduits

Penetration Seal: Cable conduits sealed with HENSOTHERM® 7 KS viskos. Min. Separation between seals (a2) = 0 mm, annular space (a1) nominally 0 mm and any remaining space filled as described. Service may be installed at 0 mm distance to the floor.

Construction details:



A.1.4.1 Conduits

Cables	Maximum conduit diameter mm	Annular space mm	Classification
Bundle NYM-J 3x1.5 mm ²	32	15	EI 90 C/C