



UL INTERNATIONAL (UK) LTD
 Womersley House, Building C,
 The Guildway,
 Old Portsmouth Road,
 Guildford. GU3 1LR.
 United Kingdom.



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 18/0927 of 12/12/2018
--------------------------------------	--------------------------------------

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	Knauf Firewrap
Product family to which the construction product belongs	Fire Stopping and Sealing Product: • Penetration Seals
Manufacturer	Knauf Sp. Z o.o. ul. Światowa 25 02-229 Warsaw Poland
Manufacturing plant(s)	A/003
This European Technical Assessment contains	45 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.

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.

Table of Contents

I.	SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT	3
1	Technical description of the product	3
2	Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104.....	3
3	Performance of the product and references to the methods used for its assessment	5
4	ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE.....	6
5	Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD	6
6	Issued on:.....	7
A.1	Rigid wall constructions with wall thickness of minimum 150 mm	8
A.1.1	Knauf Firewrap penetration seals, in 100 mm thick Knauf FPM - fire protection mortar seals in rigid walls with insulated metal pipes	8
A.1.2	Knauf Firewrap penetration seals, in 100 mm thick Knauf FPM - fire protection mortar seals in rigid walls with plastic pipes.	11
A.2	Rigid floor constructions with a minimum thickness 150 mm.....	12
A.2.1	Knauf Firewrap penetration seals, in 100 mm thick Knauf FPM - fire protection mortar seals in rigid floors, with insulated metal pipes	12
A.2.2	Knauf Firewrap penetration seals, in 100 mm thick Knauf FPM - fire protection mortar seals in rigid floors, with insulated metal pipes	14
A.2.3	Knauf Firewrap penetration seals, in 100 mm thick Knauf FPM - fire protection mortar seals in rigid floors, with insulated metal pipes	16
A.2.4	Knauf Firewrap penetration seal for insulated metal pipes, in Knauf FPM - fire protection mortar Seal, in rigid floors.....	18
A.2.5	Knauf Firewrap penetration seals, in 100 mm thick Knauf FPM - fire protection mortar seals in rigid floors, with plastic pipes	21
A.2.6	Knauf Firewrap penetration seals, in 50 mm thick Knauf FPM - fire protection mortar seals, backed with 50 mm stone wool, in rigid floors, with plastic pipes.....	23
A.3	Flexible and rigid wall constructions with a minimum thickness 100 mm.....	24
A.3.1	Knauf Firewrap penetration seal for insulated metal pipes, in seals comprising 25 mm deep Knauf FPM - fire protection mortar to both faces backed with 50 mm mineral fibre board, installed within flexible or rigid wall	24
A.3.2	Knauf Firewrap penetration seal for composite pipes, in seals comprising 25 mm deep Knauf FPM - fire protection mortar to both faces backed with 50 mm mineral fibre board, installed within flexible or rigid wall.....	26
A.3.3	Knauf Firewrap penetration seal for insulated metal & composite pipes, in seals comprising 25 mm deep Knauf FPM - fire protection mortar to both faces backed with 50 mm mineral fibre board, installed within flexible or rigid wall	27
A.3.4	Knauf Firewrap penetration seal for insulated metal pipes, in seals comprising 50 mm deep Knauf FPM - fire protection mortar to both faces, installed within flexible or rigid wall	28
A.4	Rigid wall constructions with floor thickness of minimum 150 mm	30
A.4.1	Knauf Firewrap penetration seal for insulated metal pipes, in 1x Knauf FPC panel 2-S seals, in rigid walls.....	30
A.5	Rigid floor constructions with floor thickness of minimum 150 mm.....	31
A.5.1	Knauf Firewrap penetration seal for plastic pipes, in 1x Knauf FPC panel 2-S, in rigid floors.....	31
A.5.2	Knauf Firewrap penetration seal for insulated metal pipes, in 1x Knauf FPC panel 2-S, in rigid floors	32
A.5.3	Knauf Firewrap penetration seal for insulated metal pipes in 2x Knauf FPC panel 2-S (separated), in rigid floors	33
A.5.4	Knauf Firewrap penetration seal for insulated metal pipes, in 2x Knauf FPC panel 2-S (back to back), in rigid floors	34
A.6	Flexible or rigid wall constructions with wall thickness of minimum 100 mm	36
A.6.1	Knauf Firewrap penetration seal for insulated metal pipes, in 2x Knauf FPC panel 1-S, in flexible or rigid walls.....	36
A.6.2	Knauf Firewrap penetration seal for insulated metal pipes, in 2x Knauf FPC panel 1-S, in flexible or rigid walls.....	38
A.6.3	Knauf Firewrap penetration seal for insulated metal pipes, in 2x Knauf FPC panel 1-S, in flexible or rigid walls.....	39
A.6.4	Knauf Firewrap penetration seal for plastic pipes, in 2x Knauf FPC panel 1-S, in flexible or rigid walls	40
A.6.5	Knauf Firewrap penetration seal for insulated metal pipes, in 2x Knauf FPC panel 1-S, in flexible or rigid walls.....	42
A.6.6	Penetration seal in Knauf FPM - fire protection mortar seals, in flexible* and rigid walls minimum 100 mm thick	44

I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

- 1) Knauf Firewrap is a pipe closure device used to form penetration seals where combustible pipes and insulated metal pipes penetrate walls and floors.
- 2) The Knauf Firewrap is supplied in Polyethylene bags size according to pipe diameter or supplied in single layer 25 metre rolls. The number of layers necessary are stated in Appendix 1. The wrap is wrapped around the pipe and pushed into the aperture in the separating element/Knauf FPC panel or cast in with Knauf FPM - fire protection mortar.
- 3) The applicant has submitted a written declaration that the product and/or constituents of the product contains no substances which have been 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.

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.

- 4) The use category of Knauf Firewrap 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.

The intended use of system Knauf Firewrap is to reinstate the fire resistance performance of flexible wall and rigid wall and floor constructions, where they are penetrated by services.

- 1) The specific elements of construction that the system Knauf Firewrap may be used to provide a penetration seal in, are as follows:
 - Flexible walls: The wall must have a minimum thickness of 100 mm and comprise steel studs lined on both faces with minimum 2 layers of 12.5 mm thick boards.
 - 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/m³.
 - 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/m³.

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

- 2) The system Knauf Firewrap may be used to provide a penetration seal with specific supporting constructions and substrates (for details see Annex A).

- 3) The provisions made in this European Technical Assessment are based on an assumed working life of the Knauf Firewrap of 10 years, provided that the conditions laid down in the manufacturers datasheet and instructions 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.
- 4) Type X: intended for use at conditions exposed to weathering.

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

Product-type: Pipe Wrap		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	Class F (not tested)
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	No performance determined
EOTA TR 001:2003	Adhesion	No performance determined
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 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 27th June 2014 relating to the European Technical Assessment ETA 18/0927 issued on 12/12/2018 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 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 penetration seal
 - Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- (b) Installation instruction:
- Steps to be followed
 - Procedure in case of retrofitting
 - Stipulations on maintenance, repair and replacement

6 Issued on:

12th December 2018

Report by:



D. Yates
Project Engineer
Building and Life Safety Technologies

Reviewed by:



C. Johnson
Staff Engineer
Building and Life Safety Technologies

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