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European Technical Assessment

**ETA 23/0971
of 29/02/2024**

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

Trade name of the construction product	Knauf Firecollar
Product family to which the construction product belongs	Fire Stopping and Sealing Product: • Penetration Seals
Manufacturer	Knauf Sia Daugavas iela 4, Saurieši, Stopiņu pagasts, Ropažu novads, LV-2118, Latvija
Manufacturing plant(s)	A/003
This European Technical Assessment contains	105 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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I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

- 1) Knauf Firecollar is a pipe closure device used to form penetration seals where combustible pipes, cables and metal pipes with insulation penetrate walls and floors.
- 2) The Knauf Firecollar is supplied with intumescent liner complete within metal steel shell, to be clamped around the service and screw fixed back to the supporting element. The Knauf Firecollar may be supplied with powder coated steel or stainless steel shells.
- 3) In flexible walls, gaps between the pipe and the construction below 8mm must have a bead of Knauf FPA Acrylic to cover the opening, and for gaps 8mm or above, the seal must be plugged with 25mm deep Knauf FPA Acrylic.

In rigid walls, gaps between the pipe and the construction below 8mm must have a bead of Knauf FPA Acrylic to cover the opening, and for gaps 8mm or above, the seal must be plugged with 20mm deep Knauf FPA Acrylic on 20mm deep backing of stonewool, alternatively 40 mm deep Knauf FPA Acrylic with no backing.

In floors, gaps between the pipe and the construction below 10mm must have 20mm deep stonewool to plug the opening, alternatively 20 mm deep Knauf FPA Acrylic with no backing, and for gaps 10mm or above, the seal must be plugged with 10mm deep Knauf FPA Acrylic on 40mm deep backing of stonewool, alternatively 50 mm deep Knauf FPA Acrylic with no backing. For collars installed on top side of floors, gaps between the pipe and the top side of the collar must have a bead of Knauf FPA Acrylic to cover the opening.

Knauf Firecollar are oversized to allow for the natural gradient of pipework for flow purposes and inconsistencies of pipe installation.

- 4) 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.

- 5) The use category of Knauf Firecollar in relation to BWR 3 (Hygiene, health and environment) is IA1, S/W2

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104: 2017

Detailed information and data is given in Annex A.

The intended use of system Knauf Firecollar 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 Firecollar may be used to provide a penetration seal in, are as follows:
 - a. Flexible walls: The wall must have a minimum thickness of 75 mm and comprise steel studs or timber studs* lined on both faces with minimum 1 layer of 12.5 mm thick boards. Flexible wall solutions may also be used in rigid walls, with a minimum density of 350 kg/m³.
 - b. Timber walls: The wall must have a minimum thickness of 100 mm and comprise solid wood or cross-laminated timber.
 - c. Rigid walls: The wall must have a minimum thickness of 75 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.
 - d. 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.
 - e. Timber floors: The floor must have a minimum thickness of 150 mm and comprise solid wood or cross-laminated timber.

* no part of the penetration seal may be closer than 100 mm to a stud, the cavity must be closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

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

Knauf Sia Fire Protection Systems which involve services penetrating both sides of a flexible wall may also be used in the situation where the services penetrates one side of the wall only and the remaining side of the wall is not penetrated at the same point (i.e. the services continues on the inside of the wall). All fire integrity and thermal insulation ratings for such single-sided penetrations remain the same as for the equivalent double-sided penetration.

- 2) The system Knauf Firecollar may be used to provide a penetration seal with specific supporting constructions and substrates (for details see Annex A).
- 3) Where single sided top face seals are described in Annex A, these can also be used in composite floors.
- 4) Where PP pipes are mentioned in Annex A, this includes PP-MV, PP-H, PP-R and similar if the pipe is according to EN 1451-1 or DIN 8077/8078. Where PE pipes are mentioned, this includes PE-LD, PE-MD, PE-HD, PE-X and similar according to EN 1519-1, EN 12201-2 or EN 12666-1.
- 5) Solutions in Annex A for 100 mm thick flexible walls and 150 mm thick rigid floors, can be used in timber walls limited to EI 90, and in timber floors limited to EI 120 (see 2.1). In timber walls and floors, gaps between the pipe and the construction must be plugged with 25 mm deep Knauf FPA Acrylic on 25 mm deep backing of stone-wool on both sides before collars are attached, with minimum 80 mm long wood screws in walls, and 100 mm long wood screws in floors. The minimum annular gap must be 10 mm wide, and the maximum aperture sizes must be Ø 180 mm in walls and Ø 220 mm in floors. For larger apertures, the annular gap must be 10 mm (+/- 2 mm).
- 6) The system Knauf Firecollar may be used in all angles between 90° and 45° in all directions for pipes with maximum diameter of 50 mm, combined with oversized collars with maximum size of 160 mm.

- 7) Where pipes are placed against a wall or a floor, so a collar can not be installed in practical, half a collar shell of the double diameter than the pipe can be used. The half collar shell must be placed towards the surface of the wall or floor, and the maximum allowed pipe diameter is 160 mm, with a maximum collar size of 315 mm.
- 8) In places where it is impossible to use screws, it is allowed to use screws on one half of a collar shell, with FPC Adhesive fixing the other half of the collar shell without screws, with a maximum allowed collar size of 200 mm. The half of a collar shell which locks the other half in place, must be the half where screws are used.
- 9) The provisions made in this European Technical Assessment are based on an assumed working life of the Knauf Firecollar of 25 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.
- 10) Type Z₂: intended for uses in internal conditions with humidity lower than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

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

Product-type: Pipe Collar		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product Performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	No performance determined
EN 13501-2	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
EN 1026	Air permeability	Annex B
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/W2 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	Z ₂
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	Rw (C;Ctr): 58 (-1;-7)
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 <https://eur-lex.europa.eu/oj/direct-access.html>) 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 7th February 2023 relating to the European Technical Assessment ETA 23/0971 issued on 29/02/2024 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 (Netherlands) B.V.

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.
 - 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. pipe trays)
- (b) Installation instruction:
- Steps to be followed
 - Procedure in case of retrofitting
 - Stipulations on maintenance, repair and replacement

6 Issued on:

29th February 2024

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