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Designated according to Article 29 of Regulation (EU) No 305/2011

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European Technical Assessment

ETA 20/0331 of 18/05/2020

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	Fire Putty
Product family to which the construction product belongs	Fire Stopping and Sealing Product: • Penetration Seals
Manufacturer	FireSeal AB Esbogatan 14 164 07 Kista Sweden
Manufacturing plant(s)	A/001
This European Technical Assessment contains	13 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) Fire Putty is a one part, non-setting fire resistant putty material, used to reinstate the fire resistance performance of wall and floor constructions where they have been provided with apertures for the penetrations of multiple services.

2) Fire Putty is supplied in 1kg tubs and is kneaded to the correct shape for installation. Fire Putty is also supplied in sheet form for sealing of electrical socket penetrations.

3) The applicant has submitted a written declaration that Fire Putty 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.

   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 Fire Putty 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

Detailed information and data is given in Annex A.

1) The intended use of Fire Putty is to reinstate the fire resistance performance of flexible wall and rigid wall and floor constructions where they are penetrated by various cables and wires.

2) The specific elements of construction that the system Fire Putty may be used to provide a penetration seal in, are as follows:

   a. Flexible walls: The wall must have a minimum thickness of 100 mm and comprise steel studs or timber studs* lined on both faces with minimum 2 layers of 12.5 mm thick boards.

   b. 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/m^3.

   c. 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

   * 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.

3) The System Fire Putty may be used to provide a penetration seal with cables and wires (for details see Annex A).

4) The system Fire Putty may be used to seal apertures in the separating element up to 120mm diameter. The minimum permitted separation between adjacent seals/apertures is 200mm. Services within the system Fire Putty seal do not require a minimum separation, except where specifically detailed in Annex A.

5) Services shall be supported at maximum 300 mm from both faces of the wall.

6) The provisions made in this European Technical Assessment are based on an assumed working life of the Fire Putty 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.

7) Type Y_2: Intended for use at temperatures below 0°C, but with no exposure to rain nor UV. Includes lower classes.

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

Product-type: Putty		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	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/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	
EOTA TR 001:2003	Adhesion	
EAD 350454-00-1104, Clause 2.2.9	Durability	Y_2
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 https://eur-lex.europa.eu/oj/direct-access.html of the European Commission[1], 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 6th March 2018 relating to the European Technical Assessment ETA 20/0331 issued on 18/05/2020 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:

18th May 2020

Report by:

C. Johnson
Staff Engineer
Building and Life Safety Technologies

Reviewed by:

D. Yates
Senior Project Engineer
Building and Life Safety Technologies

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

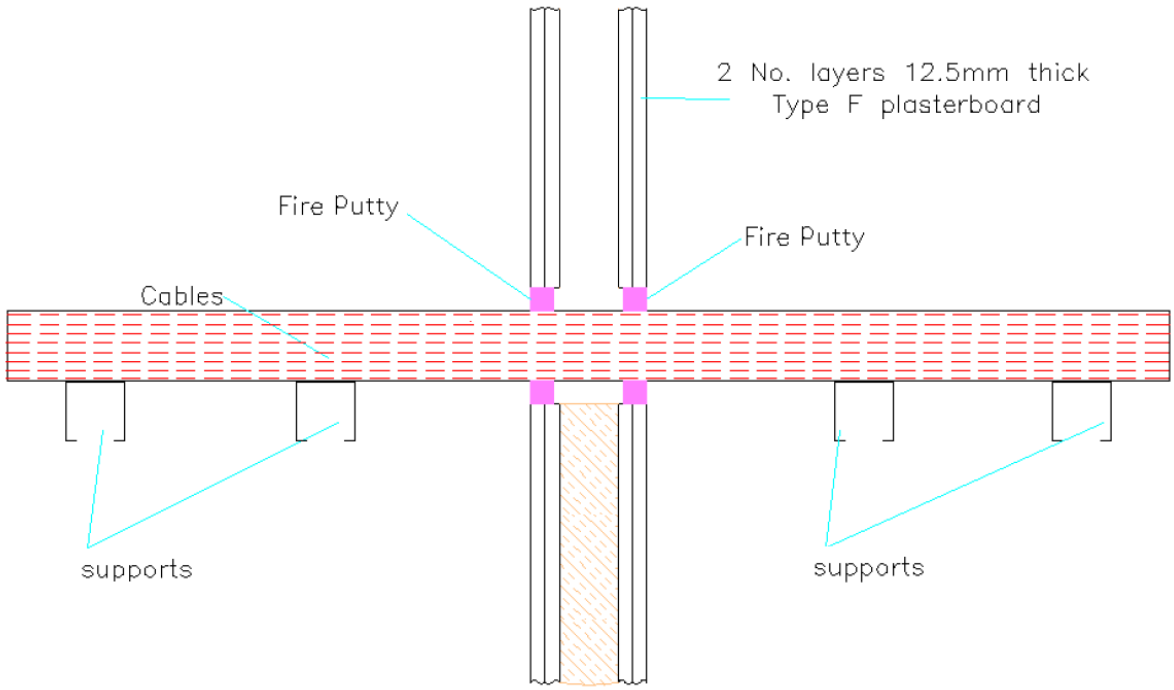
ANNEX A – Resistance to Fire Classification – Fire Putty

A.1 Flexible and Rigid wall constructions with wall thickness of minimum 100 mm

A.1.1 Cable penetration seal with 20 mm deep Fire Putty to both faces

Penetration Seal: Cables fitted at any position within the aperture (min. separation 0 mm from seal edges), with 20 mm Fire Putty to both sides of the wall. Maximum annular space 25 mm.

Construction details:



A.1.1.1 Two side penetration seal with cables

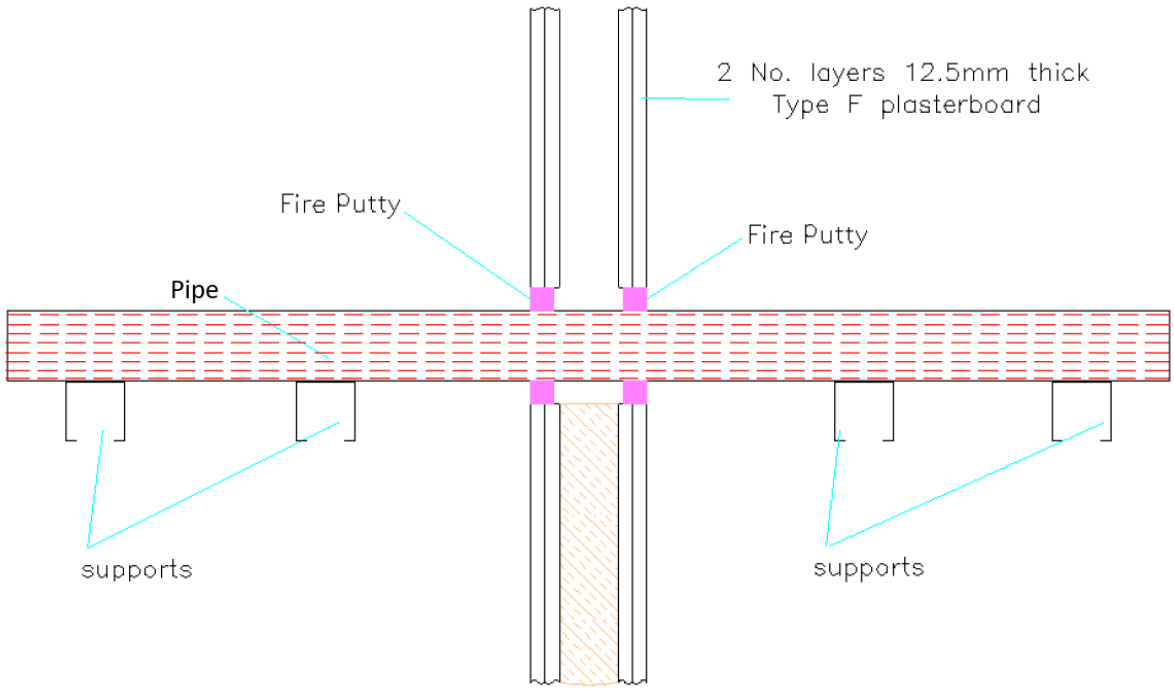
Services	Classification
Electrical cables – Type A1, in a bundle of up to 10 no.	**EI 120**
Electrical cables – Type A2, in a bundle of up to 10 no.	**E 120, EI 90**
Electrical cables – Type A3, in a bundle of up to 5 no.	**E 120, EI 90**
Electrical cable – Type C1, 1 no.	**E 120, EI 90**
Electrical cable – Type C2, 1 no.	**E 120, EI 90**
Electrical cable – Type C3, 1 no.	**E 120, EI 60**
Electrical cable – Type D1, 1 no.	**E 120, EI 60**
Electrical cable – Type D2, 1 no.	**EI 120**
Electrical cables – Type E, in a bundle of up to 4 no.	**EI 120**
Electrical wire – up to 24mm diameter, 1 no.	**E 120, EI 45**
Electrical wire – Type G2, 1 no.	**E 120, EI 60**
Telecommunication cables up to 21 mm Ø in a bundle of up to 32 no.	**EI 120**
Telecommunication cables up to 21 mm Ø in a bundle of up to 144 no.	**E 120, EI 60**

- Type A1 cable = 5 x 1.5 mm^2 core HD603.3 electrical cable with PVC insulation, PVC sheath and 14 mm diameter
- Type A2 cable = 5 x 1.5 mm^2 core HD22.4 electrical cable with EPR insulation, PO sheath and 11.2-14.4 mm diameter
- Type A3 cable = 5 x 1.5 mm^2 core HD604.5 electrical cable with XLPE insulation, EVA sheath and 13 mm diameter
- Type C1 cable = 4 x 95 mm^2 core HD604.5 electrical cable with XLPE insulation, EVA sheath and 42 mm diameter
- Type C2 cable = 4 x 95 mm^2 core HD22.4 electrical cable with EPR insulation, PO sheath and 48.4-61 mm diameter
- Type C3 cable = 4 x 95 mm^2 core HD604.5 electrical cable with XLPE insulation, EVA sheath and 42 mm diameter
- Type D1 cable = 4 x 185 mm^2 core HD603.3 electrical cable with PVC insulation, PVC sheath and 52 mm diameter
- Type D2 cable = 4 x 185 mm^2 core HD22.4 electrical cable with EPR insulation, PO sheath and 64-80 mm diameter
- Type E cable = 1 x 185 mm^2 core HD603.3 electrical cable with PVC insulation, PVC sheath and 23-27 mm diameter
- Type G2 wire = 1 x 185 mm^2 H07V-R HD 21.3 electrical wire with PVC insulation and 19.3-23.3 mm diameter

A.1.2 Pipe penetration seal with 20 mm deep Fire Putty to both faces

Penetration Seal: Metal pipes fitted centrally within the aperture, with 20 mm Fire Putty to both sides of the wall. Maximum annular space 32 mm.

Construction details:



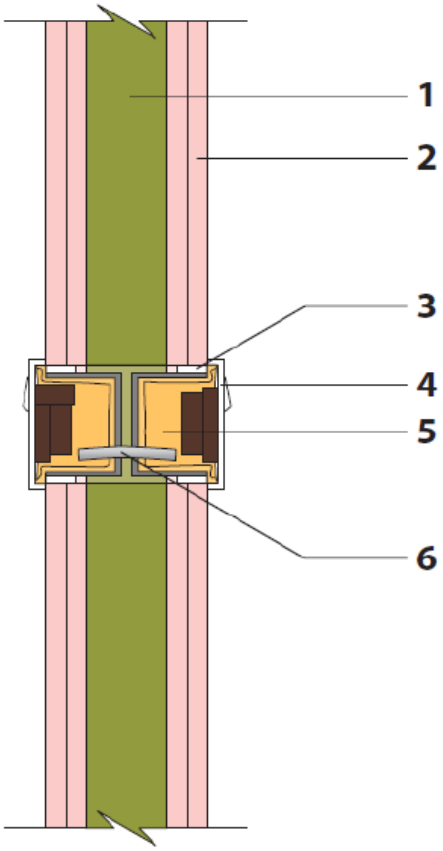
A.1.2.1 Two side penetration seal with metal pipes

Pipe	Insulation type	Insulation thickness	Classification
Copper/steel 22mm Ø/0.9 mm wall	None	-	**E 120 C/U, EI 30 C/U**
Copper/steel 22mm Ø/0.9 mm wall	Continuous Sustained (CS) Stone wool, min. density 120 kg/m^3	25 mm	**EI 120 C/U**
Copper/steel 22mm Ø/0.9 mm wall	Local interrupted (LI), min. 500mm both sides - K-Flex ST/Armaflex Class O	19 mm	**EI 120 C/U**
Steel 22mm Ø/1.2 mm wall	None	-	**EI 120 C/U**
Steel 22mm Ø/1.2 mm wall	Local interrupted (LI), min. 500mm both sides - K-Flex ST/Armaflex Class O	19 mm	**EI 120 C/U**
Steel 42mm Ø/3.2 mm wall	Local interrupted (LI), min. 500mm both sides - K-Flex ST/Armaflex Class O	19 mm	**E 120, EI 60 C/U**

A.1.3 Electrical socket penetration seal with Fire Putty Electrical Box Protector to both faces

Penetration Seal: Back to back socket boxes sealed into the aperture with Firebreak 22 sealant* and lined internally or externally with a sheet of Fire Putty Electrical Box Protector.

Construction details:



1. Partition core insulation
2. Plasterboard
3. Firebreak 22 sealant*
4. Socket
5. Fire Putty Electrical Box Protector
6. Connecting twin and earth electrical cable

***** Or alternative acrylic based sealant with equivalent classification in accordance with EN 13501-2

A.1.3.1 Electrical Box Protector

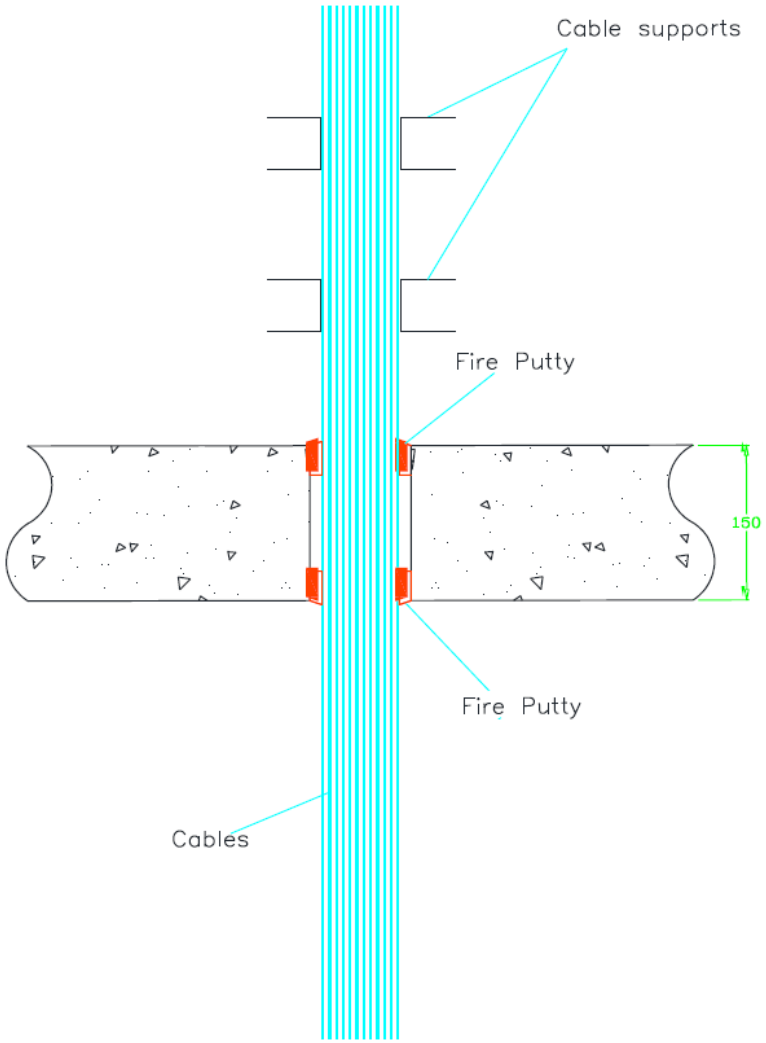
Socket	Electrical Box Protector mm	Internal or external installation	Classification
Double socket with plastic front and backbox, max. 148 x 88 mm	170 x 170	Internal	**E 120, EI 90**
Double socket with plastic front and backbox, max. 148 x 88 mm	230 x 230	External	**EI 90**

A.2 Rigid/concrete floor constructions with minimum thickness of 150 mm

A.2.1 Cable penetration seal with 20 mm deep Fire Putty to both faces

Penetration Seal: Cables fitted centrally within the aperture, with 20 mm Fire Putty to both sides of the wall. Maximum annular space 25 mm.

Construction details:



A.2.1.1 Two side penetration seal with cables

Services	Classification
Electrical cables – Type A1, in a bundle of up to 10 no.	**E 240, EI 180**
Electrical cables – Type A2, in a bundle of up to 10 no.	**E 240, EI 180**
Electrical cables – Type A3, in a bundle of up to 5 no.	**EI 240**
Electrical cable – Type C1, 1 no.	**E 240, EI 60**
Electrical cable – Type C2, 1 no.	**E 240, EI 180**
Electrical cables – Type E, in a bundle of up to 4 no.	**E 240, EI 30**
Telecommunication cables up to 21 mm Ø in a bundle of up to 10 no.	**EI 240**

- Type A1 cable = 5 x 1.5 mm^2 core HD603.3 electrical cable with PVC insulation, PVC sheath and 14 mm diameter
- Type A2 cable = 5 x 1.5 mm^2 core HD22.4 electrical cable with EPR insulation, PO sheath and 11.2-14.4 mm diameter
- Type A3 cable = 5 x 1.5 mm^2 core HD604.5 electrical cable with XLPE insulation, EVA sheath and 13 mm diameter
- Type C1 cable = 4 x 95 mm^2 core HD604.5 electrical cable with XLPE insulation, EVA sheath and 42 mm diameter
- Type C2 cable = 4 x 95 mm^2 core HD22.4 electrical cable with EPR insulation, PO sheath and 48.4-61 mm diameter
- Type E cable = 1 x 185 mm^2 core HD603.3 electrical cable with PVC insulation, PVC sheath and 23-27 mm diameter