UL INTERNATIONAL (UK) LTD
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United Kingdom

appointed according to Article 29 of Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment

0843-UKTA-24/0041 of 30/09/2024

Technical Assessment Body Issuing the UKTA:	UL International (UK) Ltd
Trade name of the construction product	Astro HS Compound
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Products - Penetration Seals
Manufacturer	Astroflame Fireseals Ltd Unit 8, The I.O. Centre Stephenson Road Segensworth Fareham Hampshire PO15 5RU
Manufacturing plant(s)	A/011
This UK Technical Assessment contains	9 pages including 1 Annex which forms an integral part of this assessment.
This UK Technical Assessment* is issued, on the basis of	EAD 350454-00-1104, September 2017

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

*** in accordance with Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020**

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I. SPECIFIC PARTS OF THE UK TECHNICAL ASSESSMENT

1 Technical description of the product

1) Astro HS Compound is a gypsum based mortar material, used to reinstate the fire resistance performance of floor constructions where they have been provided with apertures for the penetrations of multiple services.

2) Astro HS Compound is supplied as a dry material, and is mixed with water to the required ratio prior to installation.

3) Astro HS Compound when mixed is self-supporting in a floor to a maximum of 1800mm x 1800mm. Temporary shuttering is required to support the wet weight of the Astro HS Compound.

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

The intended use of Astro HS Compound is to reinstate the fire resistance performance of rigid floor constructions where they are penetrated by various cables and metallic pipes.

1) The specific elements of construction that the Astro HS Compound may be used to provide a penetration seal in, are as follows:

Rigid Floors: The floor must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, 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 Astro HS Compound may be used to provide a penetration seal with cables, cable trays and metallic pipes with insulation (for details see Annex A).

3) The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.

4) The system Astro HS Compound may be used to seal apertures in the separating element up to 1800mm wide by 1800mm long in a floor. The minimum permitted separation between adjacent seals/apertures is 200mm. Services within the Astro HS Compound do not require a minimum separation.

5) Services in floors shall be supported at maximum 150mm and 300mm from the exposed face.

6) The provisions made in this UK Technical Assessment are based on an assumed working life of the Astro HS Compound of 25 years, provided that the conditions laid down in section 5 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 or the Technical Assessment Body, 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) Use category: Type Z_1: Intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

8) Precautions are required to be taken to prevent a person stepping onto a blank horizontal penetration seal or falling against a blank vertical, or sloped, penetration seal.

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

Product-type: Intumescent sheet		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	Content, emission and/or release of dangerous substances	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	Type Z_1
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	R_w (C;Ctr)= 50(-1;-4)dB
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 Statutory Instrument 2019 No. 465 – made 5th March 2019 and cited as the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and coming into force on exit day and Statutory Instrument 2020 No. 1359 – made 26th November 2020 and cited as the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 and coming into force immediately before the 2019 Regulations come into force, on the procedure for attesting the conformity of construction products as regards fire stopping, fire sealing and fire protective products, published as 'Pre-Exit' European Assessment Documents, (see https://www.gov.uk/guidance/pre-exit-european-assessment-documents-construction-products), the system of assessment and verification of constancy of performance (see Annex V to Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020) given in the following table(s) 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 UK Technical Assessment.

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

The factory production control shall be in accordance with the Control Plan of 04/11/2022 relating to the UK Technical Assessment 0843-UKTA-24/0041 issued on 30/09/2024 which is part of the technical documentation of this UK 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.

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:

30th September 2024

Report by:

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Project Engineer Associate
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Reviewed by:

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Senior Staff Engineer
Built Environment

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

ANNEX A – Resistance to Fire Classification – Astro HS Compound

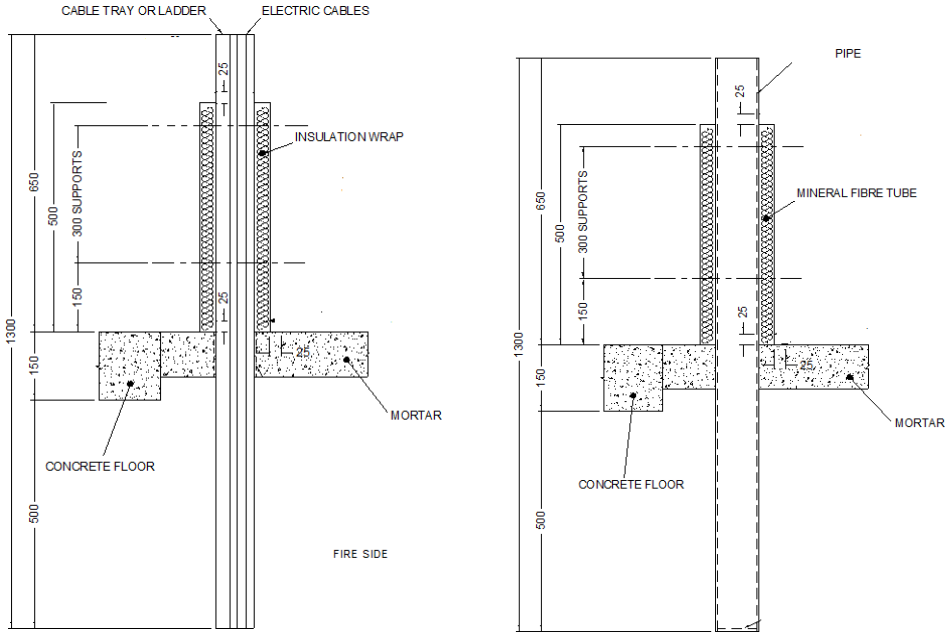
A.1 Rigid floor constructions according to I.2.1 with floor thickness of minimum 150 mm

A.1.1 Penetration seal with Astro HS Compound installed the 100mm depth of the floor, maximum seal size 1800mm x 1800mm

Penetration Seal: Metallic pipes (insulated) and various cables (insulated) penetrating through a rigid floor construction. Astro HS Compound flush with the upper surface of the floor.

Astro HS Compound is applied to seal around the services and gaps of service penetration

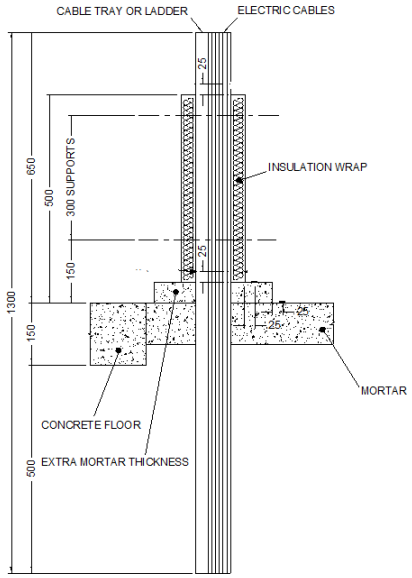
Construction details:



A.1.1.1 Separation of openings minimum 200 mm

Services	Classification
Copper pipe 40-107 mm Ø and 1.5 – 14.2 mm wall, insulated with 'LI' (local interrupted 500mm) 50 mm thick Rockwool H&V Pipe Section min 150kg/m^3	**E 60 C/U** **EI 15 C/U**
Steel pipe 40-115 mm Ø and 3.5 – 14.2 mm wall, insulated with 'LI' (local interrupted 500mm) 50 mm thick Rockwool H&V Pipe Section min 150kg/m^3	**EI120 C/U**
Steel pipe 160 mm Ø and 5– 14.2 mm wall, insulated with 'LI' (local interrupted 500mm) 50 mm thick Rockwool H&V Pipe Section min 150kg/m^3	**E 120 C/U** **EI 90 C/U**
Electrical cables up to 80 mm Ø, insulated with 25mm thick Rockwool Duct Wrap 500mm long min 45kg/m^3	**E 120** **EI 60**
Non-sheathed wire up to 24 mm Ø insulated with 25mm thick Rockwool Duct Wrap 500mm long min 45kg/m^3	**EI 120**

A.1.2 Penetration seal Astro HS Compound installed the 150mm depth of the floor, maximum seal size 1800mm x 1800mm

Penetration Seal: Various cables (insulated) penetrating through a rigid floor construction. Astro HS Compound flush with the upper surface of the floor. An additional 50mm thickness of compound is applied round the upper side of the cables. Astro HS Compound is applied to seal around the services and gaps of service penetration
Construction details: 

A.1.2.1 Separation of openings minimum 200 mm

Services	Classification
Telecomm cables in bundles of up to 100 mm diameter with 25mm thick Rockwool Duct Wrap 500mm long min 45kg/m^3	**EI120**