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**European Technical
Assessment**

**ETA 14/0281
Of 29/04/15**

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

Trade name of the construction product	Firecrete EN Standard Fire Stopping Mortar
Product family to which the construction product belongs	Fire Stopping and Sealing Product Penetration Seals
Manufacturer	HOBEN INTERNATIONAL LTD Brassington Nr Matlock Derbyshire DE4 4HF
Manufacturing plant(s)	E/060
This European Technical Assessment contains	23 pages including 3 Annex(es) which form an integral part of this assessment.
	Annex(es) A - C Contain(s) confidential information and is/are not included in the European Technical Assessment when that assessment is publicly available.
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	ETAG 026, edition 2011, used as European Assessment Document (EAD)

General Comments

1. This European Technical Assessment is issued by Warrington Certification Limited on the basis of ETAG 026 Fire Protective Products Part 1: General June 2013, and Part 2: Fire Stopping and Fire Sealing Products Aug 2011, Used as European Assessment Document.
2. This European Technical Assessment is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1.



1 SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical Description of the Product

(Detailed information and data are given in Annexes)

- 1) Firecrete EN Standard Fire-Stopping Mortar is a gypsum based mortar material, used to reinstate the fire resistance performance of floor and wall constructions where they have been provided with apertures for the penetrations of multiple services.
- 2) Firecrete EN Standard Fire-Stopping Mortar is supplied as a dry material, and is mixed with water to the required ratio prior to installation.
- 3) Firecrete EN Standard Fire-Stopping Mortar when mixed is self-supporting in a floor and wall to a maximum of 1100mm x 1100mm. Temporary shuttering is required to support the wet weight of the Firecrete EN Standard Fire-Stopping Mortar.

Internal use- ETAG 026-2 (used as European Assessment Document EAD) Type Z₁.

2 Specification Of The Intended Use In Accordance With The Relevant EAD

2.1 Intended Use

The intended use of Firecrete EN Standard Fire-Stopping Mortar is to reinstate the fire resistance performance of rigid wall and floor constructions where they are penetrated by various cables and metallic pipes.

- 1) The specific elements of construction that the System Firecrete EN Standard Fire-Stopping Mortar 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.

Rigid Walls: 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 Firecrete EN Standard Fire-Stopping Mortar may be used to provide a penetration seal with cables, cable trays and metallic pipes with insulation (for details see Annex C).
- 3) The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.
- 4) Services in floors shall be supported at maximum 450mm from the exposed face.
- 5) Services in walls shall be supported at maximum 150mm from both faces of the wall.



- 6) The provisions made in this European Technical Approval are based on an assumed working life of the Firecrete EN Standard Fire-Stopping Mortar of 25 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.

2.2 Use Category

Type Z₁: 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.



3 Performance Of The Product And References To The Methods Used For Its Assessment

The assessment of fitness for use has been made in accordance with EOTA ETAG 026 Part 2: 2011-08-08 (used as European Assessment Document, EAD)

ETAG Clause No.	ETA Clause No.	Characteristic	Assessment of characteristic
		Mechanical resistance and stability	Not relevant
		Safety in case of fire	
2.4.1	3.1	Reaction to fire	Class F according to EN 13501-1
2.4.2	3.2	Resistance to fire	See clause 3.2 & Annex C
		Hygiene, Health and the Environment	
2.4.3	3.3	Air permeability	No performance determined
2.4.4	3.4	Water permeability	No performance determined
2.4.5	3.5	Dangerous substances	See clause 3.5
		Safety in use	
2.4.6	3.6	Mechanical resistance and stability	No performance determined
2.4.7	3.7	Resistance to impact/movement	No performance determined
2.4.8	3.8	Adhesion	No performance determined
		Protection against noise	No performance determined
2.4.9	3.9	Airborne sound insulation	$R_w (C;C_{tr}) = 47(-1;-3)dB$
		Energy, Economy and Heat Retention	
2.4.10	3.10	Thermal properties	No performance determined
2.4.11	3.11	Water vapour permeability	No performance determined
		General aspects relating to fitness for use	
2.4.12	3.12	Durability and serviceability	Z₁

3.1 Reaction to fire

System Firecrete EN Standard Fire-Stopping Mortar is classified 'F' in accordance with EN 13501-1.



3.2 Resistance to fire

System Firecrete EN Standard Fire-Stopping Mortar has been tested in accordance with BS EN 1366-3: 2009 based upon the test results and the field of direct application specified within EN 1366-3: 2009, the system Firecrete EN Standard Fire-Stopping Mortar has been classified in accordance with EN 13501-2, as given in Annex C:

The seals may only be penetrated by the services described in Annex C; other parts or support constructions must not penetrate the seal.

The service support construction must be fixed to the building element containing the penetration seal or a suitable adjacent building element, and the unexposed side for floors, in such a manner that in the case of fire, no additional load is imposed on the seal. Furthermore it is assumed that the unexposed face support is maintained for the required period of fire resistance.

Firecrete EN Standard Fire-Stopping Mortar seals in floors must be installed over a shutter that is capable of supporting the weight of the mortar, the shutter should remain in place.

Cables should be insulated with minimum 45kg/m³ Rockwool Duct Wrap minimum 25mm thick 500mm long to the unexposed face

Pipes should be insulated with minimum 150kg/m³ Rockwool H&V Pipe Section minimum 50mm thick 500mm long to the unexposed face (CI)

Pipes must be perpendicular to the seal surface.

It is assumed that compressed air systems are switched off by other means in the case of fire.

The function of the pipe seal in case of pneumatic dispatch systems, pressurised air systems etc. is guaranteed only when the systems are shut off in case of fire.

The assessment does not cover the avoidance of destruction of the seal or of the abutting building element(s) by forces caused by temperature changes in case of fire. This has to be considered when designing the piping system.

The approval does not address any risks associated with leakage of dangerous liquids or gases caused by failure of the pipe(s) in case of fire.

The durability assessment does not take account of the possible effect of substances permeating through the pipe on the penetration seal.

The classifications relate to C/U(capped inside /un-capped outside the furnace) for metallic pipes, insulated. For further information refer to national regulations.

3.3 Air permeability

No performance determined

3.4 Water permeability

No performance determined



3.5 Dangerous substances

Hoben International Ltd has presented a declaration that Firecrete EN Standard Fire-Stopping Mortar does not contain any substance of high concern with regards to REACH Regulations and are compliant with the requirements reference to <http://ec.europa.eu/enterprise/construction/cpd-ds/index.cfm>

In addition to the specific clauses relating to dangerous substances contained in this European technical approval, 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 Directive, these requirements need also to be complied with, when and where they apply.

3.6 Mechanical resistance and stability

No performance determined.

3.7 Resistance to impact/movement

No performance determined.

3.8 Adhesion

Not relevant.

3.9 Airborne sound insulation

$R_w(C;C_{tr}) = 47(-1;-3)dB$

3.10 Thermal Properties

No performance determined.

3.11 Water vapour permeability

No performance determined.

3.12 Durability and serviceability

Firecrete EN Standard Fire-Stopping Mortar has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z₁ use category specified in ETAG 026-2, and the results of the tests have demonstrated suitability for penetration seals 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.



4 Assessment And Verification Of Constancy Of Performance (Hereinafter AVCP) System Applied, With References To Its Legal base

According to the decision 1999/454/EC of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) given in the following table apply:

Products	Intended uses	Level or Class	System
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	Any	System 1

5. Technical Details Necessary For The Implementation Of The AVCP System, As Provided For In The Applicable EAD.

Tasks for 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 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 7.3.14 relating to the European technical assessment ETA 14/0281 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 Warrington Certification Limited.

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



Other tasks of 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.
- Services for 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)
- 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.

Tasks of approved bodies

The approved body shall perform the

- initial type-testing of the product,
- initial inspection of factory and of factory production control,
- continuous surveillance, assessment and approval of factory production control,

In accordance with the provisions laid down in the "Control Plan" of 7.3.14 relating to the European Technical Assessment 14/0281.

The approved body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

The approved certification body involved by the manufacturer shall issue an EC certificate of conformity of the product stating the conformity with the provisions of this European technical assessment.

In cases where the provisions of the European technical assessment and its "Control Plan" are no longer fulfilled the certification body shall withdraw the certificate of conformity and inform the Warrington Certification Limited without delay.



Signatories



Responsible Officer

C. Abbott* - Principal Certification Engineer



Approved

A. Kearns* - Technical Manager

* For and on behalf of Warrington Certification Limited.



Annex A

Reference Documents and LIST OF ABBREVIATIONS

References to standards mentioned in the ETA:

EN 13501-1	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests

Other reference documents:

EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products
ETAG No. 026: Part 2	Guideline For European Technical Approval of Fire Stopping and Fire Sealing Products, Part 3: Penetration Seals(used as European Assessment Document, EAD)



Annex B

Description of Product and Product Literature

Firecrete EN Standard Fire-Stopping Mortar

A detailed specification of the product is contained in document "Evaluation Report" and "Control Plan of 7th March 2014" relating to the European Technical Approval ETA 14/0281 issued on 29/04/15, of Firecrete EN Standard Fire-Stopping Mortar which is a non-public part of this ETA.

SANDERSFIRE INTERNATIONAL
A Division of Hobas International Limited

FIRE RATED MORTARS

FOR SEALING WALL & FLOOR PENETRATIONS

- ▶ **Non-Shrinking, gas tight seals**
Mixed with water, Firecrete is trowelled or poured into wall or floor penetrations around services to stop the passage of flame, smoke and toxic gases.
- ▶ **Excellent workability ranging from stiff to pourable consistency**
Fully set within 2-3 hours
- ▶ **Load bearing performance in floor seals**
High compressive and flexural strength

Tested & Approved to...

- BS476 p20, 1987
- prEN1366-3 2004
- ASTM E814

FM APPROVED UL

▶ **Easy Preparation & Application...**

- 1 Add Firecrete powder to water
- 2 Mix until smooth
- 3 Pour Firecrete mix into penetration

www.sandersfire.co.uk



Annex C

Resistance to Fire Classification of Firecrete EN Standard Fire-Stopping Mortar

C.1 Rigid floor constructions according to 1.2.1 with floor thickness of minimum 150 mm

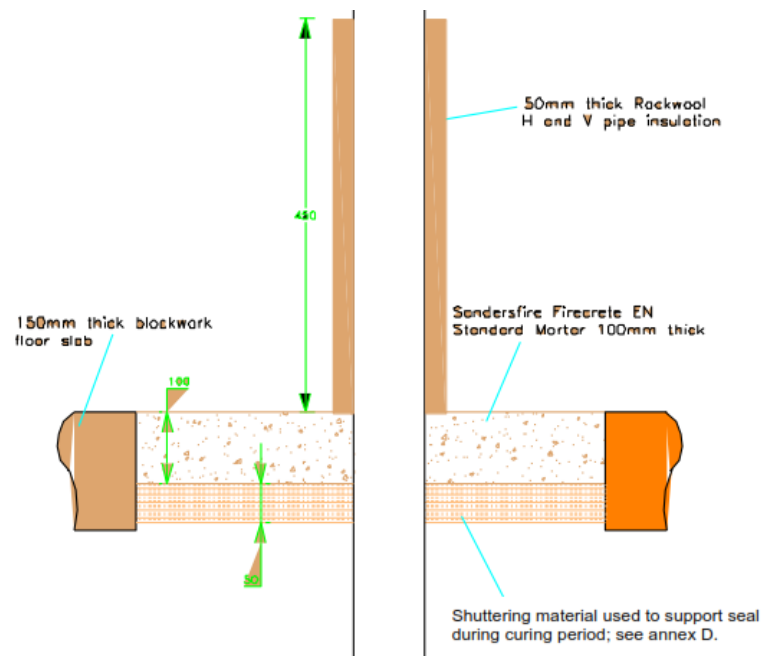
C.1.1 Penetration seal with Firecrete EN Standard Fire-Stopping Mortar installed the 100mm depth of the floor, maximum seal size 1100mm x 1100mm

Penetration Seal: Metallic pipes (insulated) penetrating through a rigid floor construction. Firecrete EN Standard Fire-Stopping Mortar flush with the upper surface of the floor.

Firecrete EN Standard Fire-Stopping Mortar is applied to seal around the services and gaps of service penetration

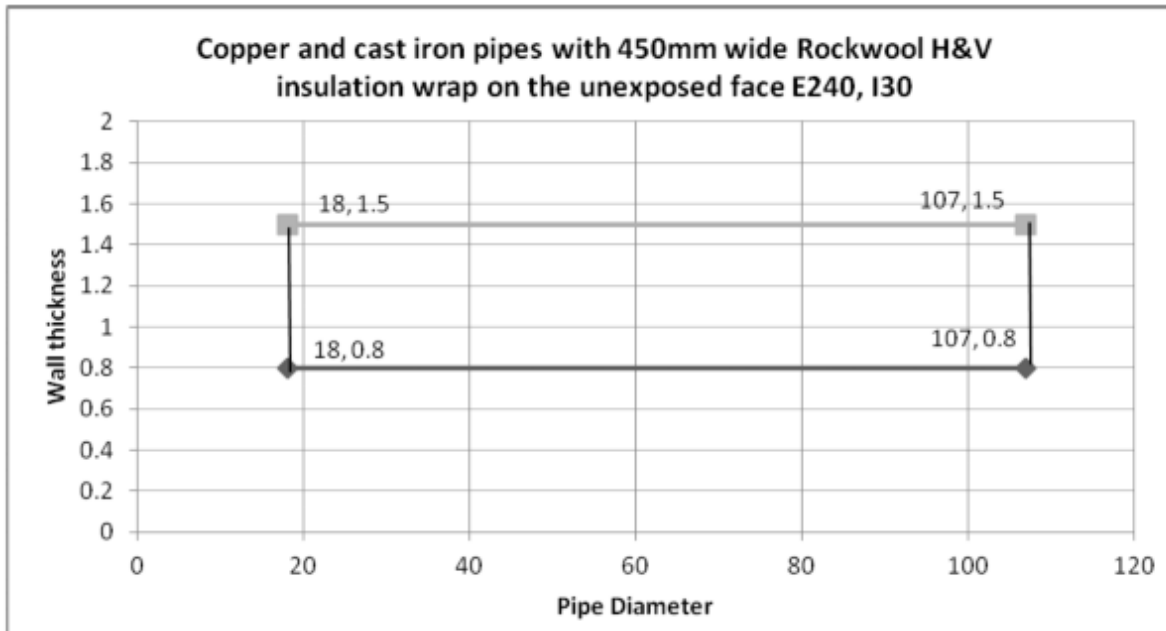
Pipes must be insulated with minimum 150kg/m^3 Rockwool H&V foil faced mineral insulation, 50mm thick and projecting 450mm from the unexposed surface of the floor

Construction details:



C.1.1.1 Separation of openings minimum 200 mm

The area inside the graph below shows the coverage of the allowable “metal” pipe diameter and wall thickness for applications up to E240 and EI30: (any pipe size variation along or between the lines is covered)

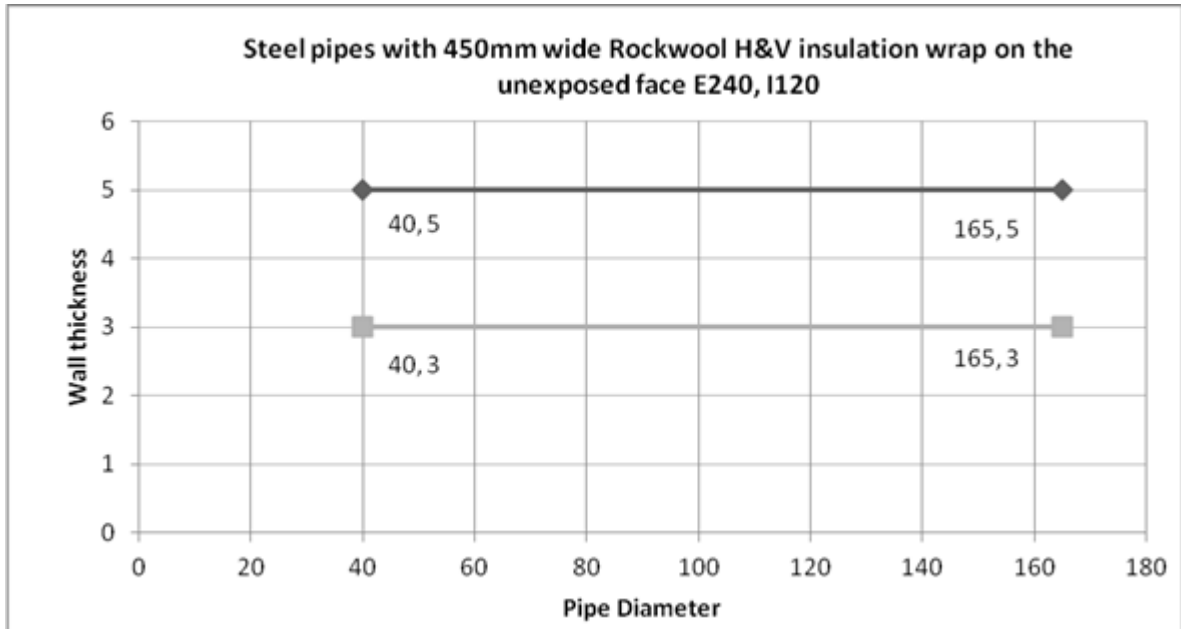


Services	Classification
Copper and cast iron pipe 18 - 107mm Ø and 0.8 – 1.5mm wall thickness, insulated with Rockwool H&V wrap	<p>E 240 C/U and C/C</p> <p>EI 30 C/U and C/C</p>



C.1.1.2 Separation of openings minimum 200 mm

The area inside the graph below shows the coverage of the allowable steel pipe diameters and wall thickness for applications up to E240 and EI120: (any pipe size variation along or between the lines is covered)



Services	Classification
Steel pipe 40 - 165mm Ø and 3 - 5mm wall thickness, insulated with Rockwool H&V wrap	E 240 C/U and C/C EI 120 C/U and C/C



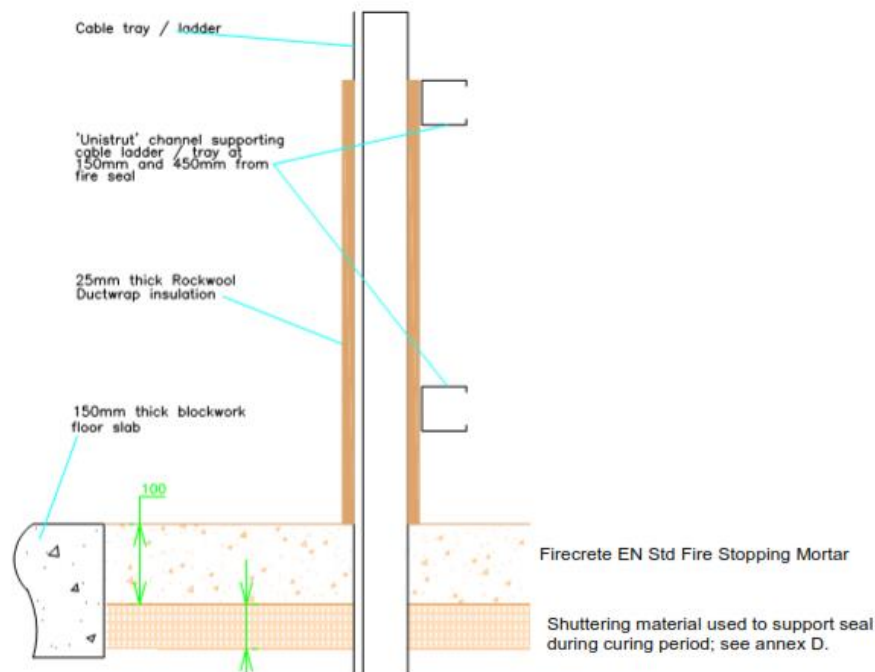
C.1.2 Penetration seal with Firecrete EN Standard Fire-Stopping Mortar installed the 100mm depth of the floor, maximum seal size 1100mm x 1100mm

Penetration Seal: Cables (insulated) penetrating through a rigid floor construction. Firecrete EN Standard Fire-Stopping Mortar flush with the upper surface of the floor.

Firecrete EN Standard Fire-Stopping Mortar is applied to seal around the services and gaps of service penetration

Cables must be insulated with minimum 150kg/m^3 Rockwool H&V foil faced mineral insulation, 50mm thick and projecting 450mm from the unexposed surface of the floor

Construction details:



C.1.2.1 Separation of openings minimum 200 mm

Services	Classification
Electrical cables, maximum 80mm Ø, insulated with Rockwool Ductwrap	EI 120
Non-sheathed wire, maximum 24mm Ø, insulated with Rockwool Ductwrap	E 240 EI60
Telecomm cable, maximum 21mm Ø in bundles up to 100mm diameter, insulated with Rockwool Ductwrap. Seal thickness 100mm	EI60



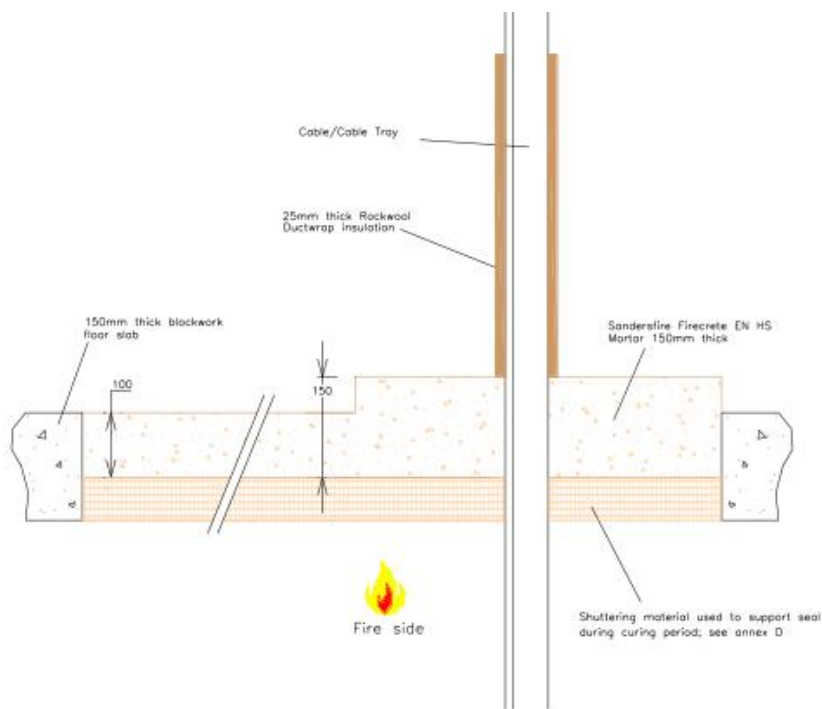
C.1.3 Penetration seal with Firecrete EN Standard Fire-Stopping Mortar installed the locally 150mm depth of the floor, maximum seal size 1100mm x 1100mm

Penetration Seal: Cables (insulated) penetrating through a rigid floor construction. Firecrete EN Standard Fire-Stopping Mortar flush with the upper surface of the floor.

Firecrete EN Standard Fire-Stopping Mortar is applied to seal around the services and gaps of service penetration

Cables must be insulated with minimum 150kg/m³ Rockwool H&V foil faced mineral insulation, 50mm thick and projecting 450mm from the unexposed surface of the floor

Construction details:



C.1.3.1 Separation of openings minimum 200 mm

Services	Classification
Telecom cable maximum 21mm Ø in bundles up to 100mm diameter, insulated with Rockwool Ductwrap Seal thickness 150mm	EI 180

C.2 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm

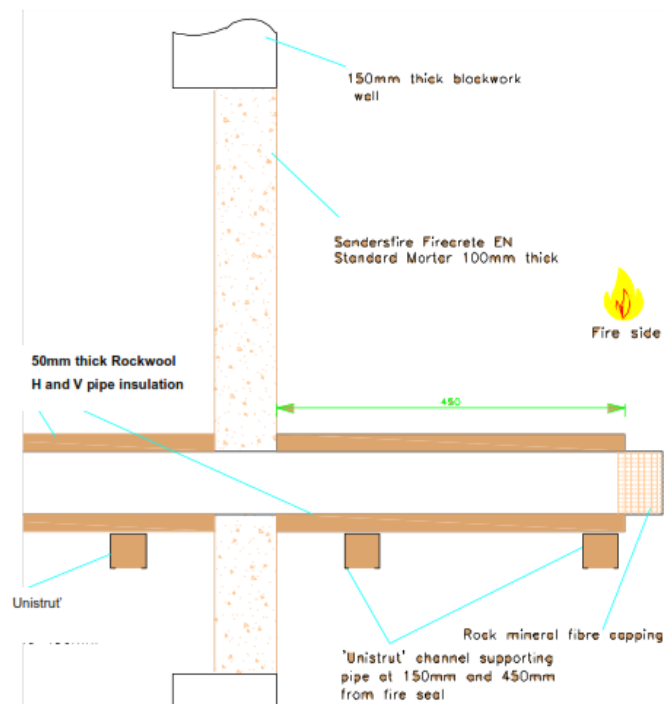
C.2.1 Penetration seal with Firecrete EN Standard Fire-Stopping Mortar installed the 100mm depth of the wall, maximum seal size 1100mm x 1100mm

Penetration Seal: Metallic pipes (insulated) penetrating through a rigid floor construction. Firecrete EN Standard Fire-Stopping Mortar flush with the upper surface of the floor.

Firecrete EN Standard Fire-Stopping Mortar is applied to seal around the services and gaps of service penetration

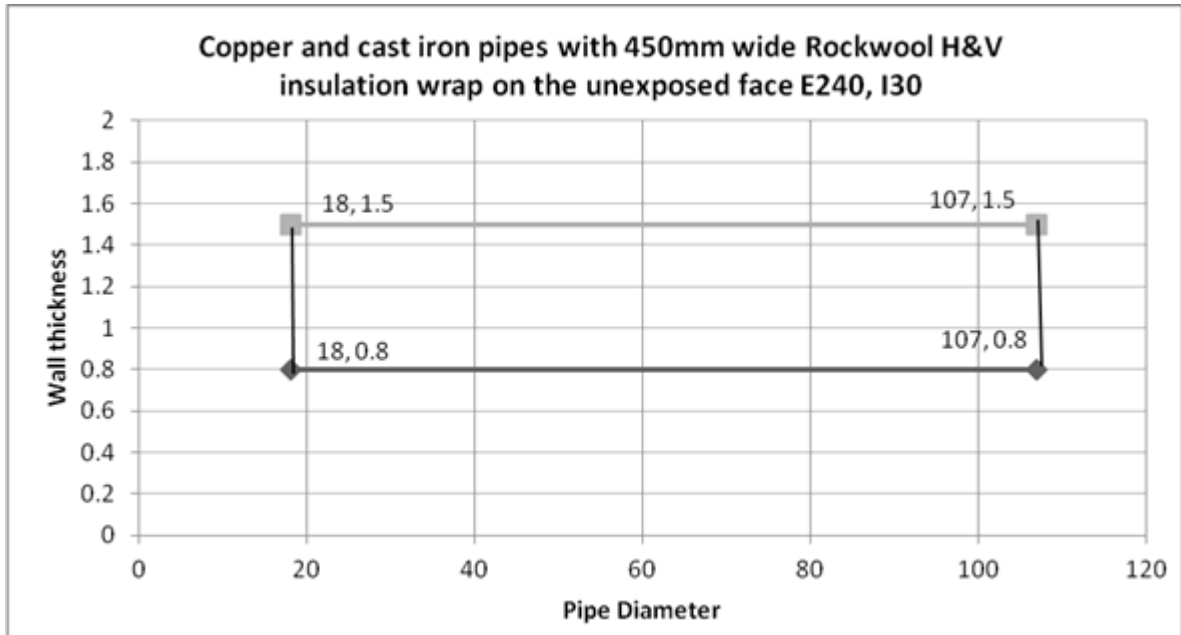
Pipes must be insulated with minimum 150kg/m^3 Rockwool H&V foil faced mineral insulation, 50mm thick and projecting 450mm from the unexposed surface of the floor

Construction details:



C.2.1.1 Separation of openings minimum 200 mm

The line graph below shows the coverage of the allowable "metal" pipe diameter and wall thickness for applications up to E240 and EI30: (any pipe size variation along or between the lines is covered)

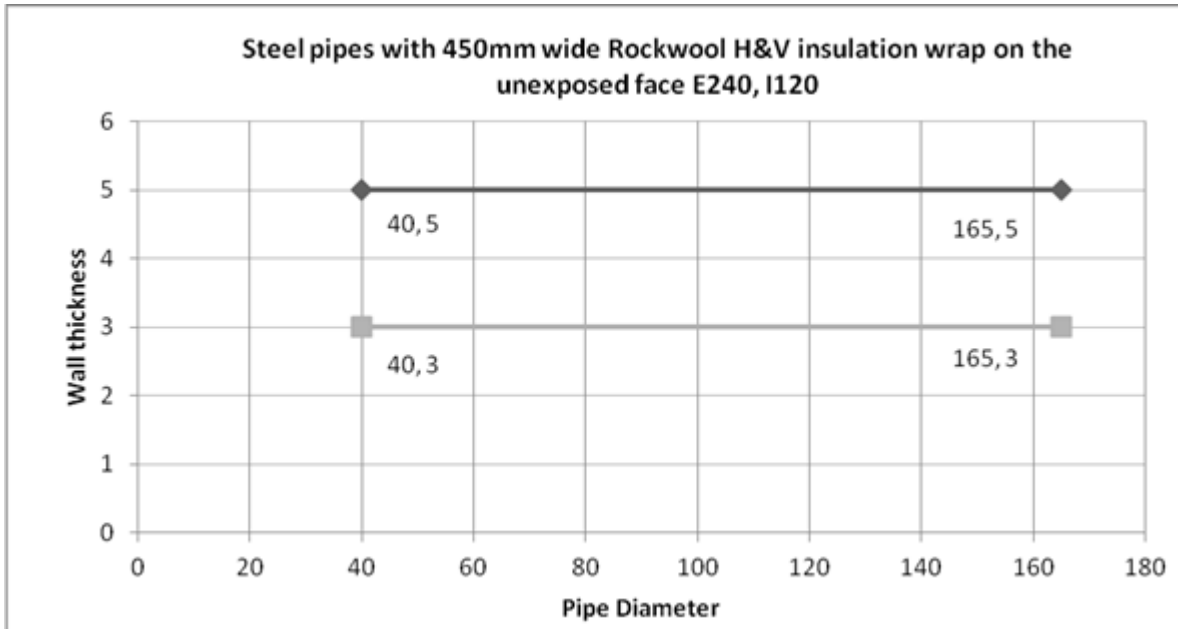


Services	Classification
Copper and cast iron pipe 18-107mm Ø and 0.8 – 1.5mm wall thickness, insulated with Rockwool H&V wrap	E 240 C/U and C/C EI 30 C/U and C/C



C.2.1.2 Separation of openings minimum 200 mm

The area inside the graph below shows the coverage of the allowable steel pipe diameters and wall thickness for applications up to E240 and EI120: (any pipe size variation along or between the lines is covered)



Services	Classification
Steel pipe 40 - 165mm Ø and 3 - 5mm wall thickness, insulated with Rockwool H&V wrap	E 240 C/U and C/C EI 120 C/U and C/C



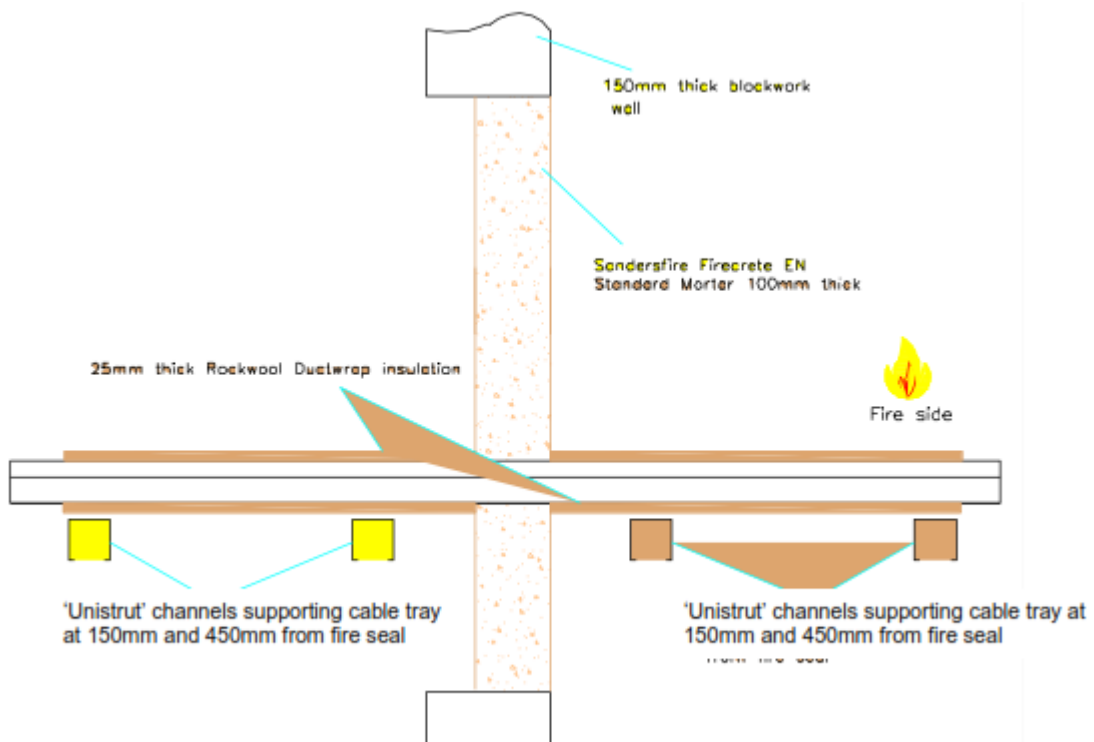
C.2.2 Penetration seal with Firecrete EN Standard Fire-Stopping Mortar installed the 100mm depth of the wall, maximum seal size 1100mm x 1100mm

Penetration Seal: Cables (insulated) penetrating through a rigid wall construction. Firecrete EN Standard Fire-Stopping Mortar flush with the upper surface of the floor.

Firecrete EN Standard Fire-Stopping Mortar is applied to seal around the services and gaps of service penetration

Cables must be insulated with minimum 150kg/m^3 Rockwool H&V foil faced mineral insulation, 50mm thick and projecting 450mm from the unexposed surface of the floor

Construction details:



C.2.2.1 Separation of openings minimum 200 mm

Services	Classification
Electrical cables, maximum 80mm Ø, insulated with Rockwool Ductwrap	E 180 EI120
Non-sheathed wire, maximum 24mm Ø, insulated with Rockwool Ductwrap	E 240 EI180
Telecomm cable, maximum 21mm Ø in bundles up to 100mm diameter, insulated with Rockwool Ductwrap.	EI180
Steel cable trays and cable ladders up to 500mm wide, insulated with Rockwool Ductwrap	EI90

