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European Technical Assessment

ETA 14/0378
of 2020/05/06

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: Warringtonfire Testing and certification Limited	
Trade name of the construction product	fischer FiAM Intumescent Acoustic Mastic
Product family to which the construction product belongs	EC PAC 35 – Fire Stopping, Fire Sealing & Fire Protective Products. Fire Retardant Products
Manufacturer	fischerwerke GmbH & Co. KG Klaus-Fischer-Strasse 1 72178 Waldachtal Germany
Manufacturing plant(s)	E091
This European Technical Assessment contains	17 pages including 1 Annex which form an integral part of this assessment.
	Annex(es) A 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	EAD 350454-00-1104 – Firestopping and fire sealing products, Penetration Seals: Issue September 2017
This version replaces:	The previous ETA with the same number issued on 29/10/19

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1. Technical Description of the Product

- 1) fischer FiAM Intumescent Acoustic Mastic is an acrylic based 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) fischer FiAM Intumescent Acoustic Mastic has slight intumescent properties that cause it to swell on heating.
- 3) Certain seals require the use of fischer Thermal Defence Wrap is used to insulate the service. The Thermal Defence Wrap is a 6mm thick foil faced ceramic based insulation material and is utilised externally to the fischer FiAM Intumescent Acoustic Mastic. See Annex A.
- 4) Certain seals require backfilling with mineral fiber 70mm thick, with a density of 80Kg/m³. See Annex A.
- 5) The fischer FiAM Intumescent Acoustic Mastic is supplied in liquid form contained within 310 ml & 380ml cartridges, 600ml foils or in 5, 10, 20 or 25 litre tubs. The sealant is gunned or trowelled into the aperture in or between the separating element/elements to a specified depth utilising various backing materials.

2. Specification Of The Intended Use In Accordance With The Applicable European assessment Document (EAD)

The intended use of fischer FiAM Intumescent Acoustic Mastic is to reinstate the fire resistance performance of rigid and flexible wall constructions where they are penetrated by various cables and metallic pipes

- 1) The specific elements of construction that the system fischer FiAM Intumescent Acoustic Mastic may be used to provide a penetration seal in, are as follows:

Rigid walls: The wall must have a minimum thickness of 70 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.

Flexible walls The wall must have a minimum thickness of 70 mm and comprise timber or steel studs lined on both faces with minimum 2 layers of 12.5 mm thick, 'Type F' Gypsum boards according to EN 520. In timber stud walls, no part of the penetration shall 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, is 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.

- 2) The fischer FiAM Intumescent Acoustic Mastic may be used to provide a penetration seal with pipes and cables (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 walls and floors shall be supported at maximum 400mm from the face of the separating element.
- 5) The provisions made in this European Technical Assessment are based on an assumed working life of the fischer FiAM Intumescent Acoustic Mastic 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.

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

	Characteristics	Assessment of characteristic
BWR 1 Mechanical resistance and stability		
BWR 2 Safety in case of fire		
	Reaction to fire	See Clause 3.1.1
	Resistance to fire	See Clause 3.1.2
BWR 3 Hygiene, Health and the Environment		
	Air permeability	See Clause 3.2.1
	Release of dangerous substances	See Clause 3.2.2
BWR 4 Safety in use		
	Durability and serviceability	See Clause 3.3.1
BWR 5 Protection against noise		
	Airborne sound insulation	See Clause 3.4.1
BWR 6 Energy, Economy and Heat Retention		
BWR 7 Sustainable use of natural resources		

3.1 Safety in case of fire

3.1.1 Reaction to fire

fischer FiAM Intumescent Acoustic Mastic is classified 'F' in accordance with EN 13501-1.

3.1.2 Resistance to fire

fischer FiAM Intumescent Acoustic Mastic 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 fischer FiAM Intumescent Acoustic Mastic has been classified in accordance with EN 13501-2, as given in Annex A:

The seals may only be penetrated by the services described in Annex A; 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, 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.

Certain pipe configurations should be insulated with minimum 300mm long, 6mm thick fischer Thermal Defence Wrap. See Annex A

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.

3.2 Hygiene, Health and the environment

3.2.1 Air permeability

fischer FiAM Intumescent Acoustic Mastic has been tested in accordance with BS EN 13141-1 to provide the following results:

Product tested		Acoustic intumescent sealant		
	Results under positive chamber pressure		Results under negative chamber pressure	
Pressure (Pa)	Leakage (m ³ /h)	Leakage (m ³ /m ² /h)	Leakage (m ³ /h)	Leakage (m ³ /m ² /h)
50	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0
150	0.0	0.0	0.1	2.8
200	0.0	0.0	0.1	2.8
250	0.0	0.0	0.1	2.8
300	0.0	0.0	0.0	0.0
450	0.1	2.8	0.1	2.8
600	0.1	2.8	0.1	2.8

3.2.2 Release of dangerous substance

Fischerwerke GmbH & Co has presented a declaration that fischer FiAM Intumescent Acoustic Mastic 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-s/index.cfm>

Confirmation has further been declared that all dangerous chemical substances ≥ 1.0 % w/w as well as all toxic, carcinogenic, toxic for reproduction and mutagenic chemical substances ≥ 0.1 % w/w (Status: 29. adaption – 2004/73/EG – of the EU directive 67/548/EEC - classification, packaging and labelling of dangerous substances) are stated in the fischer FiAM Intumescent Acoustic Mastic safety data sheets (according to 91/155/EEC including amendments) and have been considered for the classification of the products according to the directive 1999/45/EG (classification of preparations, including amendments).

All dangerous chemical substances are below the classification limits of 67/548/EEC.

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 Regulation, these requirements need also to be complied with, when and where they apply.

The use category of fischer FiAM Intumescent Acoustic Mastic in relation to BWR 3 (Hygiene, health and environment) is IA3, S/W3

3.3 Safety and accessibility in use

3.3.1 Durability and serviceability

fischer FiAM Intumescent Acoustic Mastic has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z1 use category specified in EAD 350454-00-1104 – Firestopping and fire sealing products, Penetration Seals, 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.

3.4 Protection against noise

3.4.1 Airborne sound insulation

The results of the test provided the following single number rating:

Rw (C;Ctr)= 38(-2;-7)

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 use/s	AVCP System
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	System 1

5. Technical Details Necessary for The Implementation Of The AVCP System, As foreseen in The Applicable EAD.

5.1 Tasks for the Manufacturer

5.1.1 Factory production control

The manufacturer has a Factory Production Control System (FPC) and exercises permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of policies, procedures and work instructions. This FPC system ensures that the product is in conformity with this European Technical Assessment.

The manufacturer shall only use raw materials or components that are supplied with the relevant inspection documents as laid down in the Control Plan. All incoming raw materials shall be subject to inspection, verification, controls and tests (as applicable) by the manufacturer.

The Control Plan, which is part of the technical documentation of this European Technical Assessment includes details of the extent, nature and frequency of testing and controls to be performed within the FPC system and has been agreed between the Assessment holder and Warringtonfire Testing and Certification Limited. Any changes to the FPC; Control Plan or the Product shall only be made following approval by Warringtonfire Testing and Certification Limited.

The results of FPC are recorded and evaluated. These records include but are not limited to:

- Product specification and designation, basic materials and components
- Type(s) of Control testing
- Date of manufacture of the product and date of testing of the product or basic material and components;
- Result of control and testing and, if appropriate, comparison with requirements;
- Signature of the person responsible for FPC

These records shall be presented to Warringtonfire Testing and Certification Limited upon request.

The manufacturer shall, on the basis of a contract, involve a body (bodies) which is (are) approved for the tasks referred to in section 5.2 of this ETA. For this purpose, the "Control Plan" referred to in sections 5.1.1 and 5.2 shall be handed over by the manufacturer to the approved body or bodies involved.

5.1.2 Other tasks of manufacturer

5.1.2.1 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.

(a) 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.

5.2 Tasks of notified body

5.2.1 Initial Type Testing of the Product

For initial type-testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Warringtonfire Testing and Certification Limited and the Notified Body.

5.2.2 Initial Inspection of Factory and of Factory Production Control

The Notified Body shall ascertain that, in accordance with the provisions laid down in the Control Plan, Reference 4.10.13, the factory and the factory production control are suitable to ensure continuous and orderly manufacturing of the product according to the specifications mentioned in Section 2, as well as to the Annexes to this European Technical Assessment.

5.2.3 Continuous Surveillance

The Notified Body shall visit the factory twice a year for regular inspection. It shall be verified that the system of factory production control and the specified manufacturing process is maintained in accordance with the provisions of this European Technical Assessment and the Control Plan.

Continuous surveillance and assessment of factory production control shall be performed in accordance with the provisions laid down in the agreed Control Plan.

The results of product certification and continuous surveillance shall be made available on demand by the certification or inspection body or to Warringtonfire Testing and Certification Limited. In cases where the provisions of this European Technical Assessment and the prescribed Control Plan are no longer fulfilled, the conformity certificate shall be withdrawn and the relevant authority/ies shall be informed.

Signatories



Responsible Officer
D. Thorniley* - Certification Engineer



Reviewed
R. Wakefield* - Product Fire Engineer



Approved
D. Podolski – Technical Manager

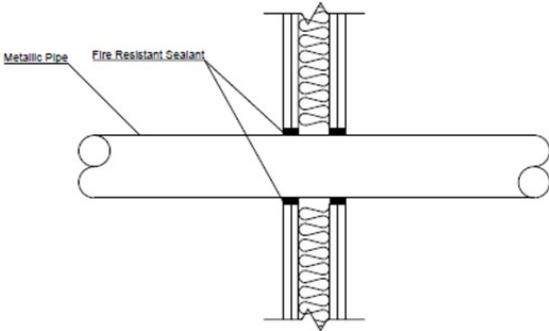
* For and on behalf of Warringtonfire.

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Annex A

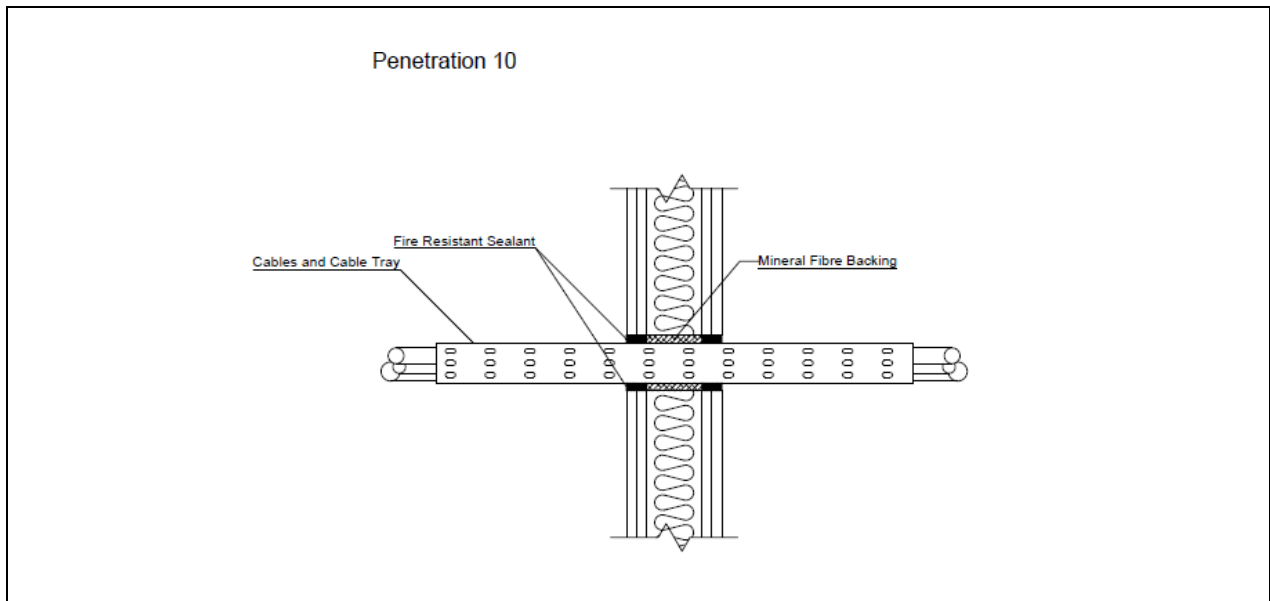
Resistance to Fire Classification of fischer FiAM Intumescent Acoustic Mastic

A1.1 fischer FiAM Intumescent Acoustic Mastic Penetration Seals. Min 120 mm thick Flexible or Rigid Wall - Pipes

Penetration Specification	fischer FiAM Intumescent Acoustic Mastic (installed both faces)	Backing Material	Classification
			
Copper/Steel Pipe 15mm \varnothing , 0.8mm – 7.4mm wall thickness	10mm annulus x 25mm deep	N/A	E120 C/U EI20 C/U
Copper/Steel Pipe 40mm \varnothing , 0.8mm – 14.2mm wall thickness			E120 C/U EI15 C/U
Copper/Steel Pipe 40-159mm \varnothing , 1.8mm – 14.2mm wall thickness			E120 C/U
Copper/Steel Pipe 40mm \varnothing , 0.8mm – 14.2mm wall thickness*			E120 C/U EI90 C/U
Copper/Steel Pipe 40-159mm \varnothing , 1.8mm – 14.2mm wall thickness*			E120 C/U EI20 C/U

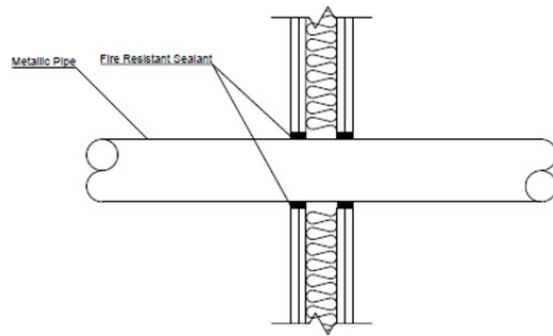
*fischer Thermal defence wrap to the unexposed face 300mm long

A1.2 fischer FiAM Intumescent Acoustic Mastic Penetration Seals. Min 120 mm thick Flexible or Rigid Wall - Cables



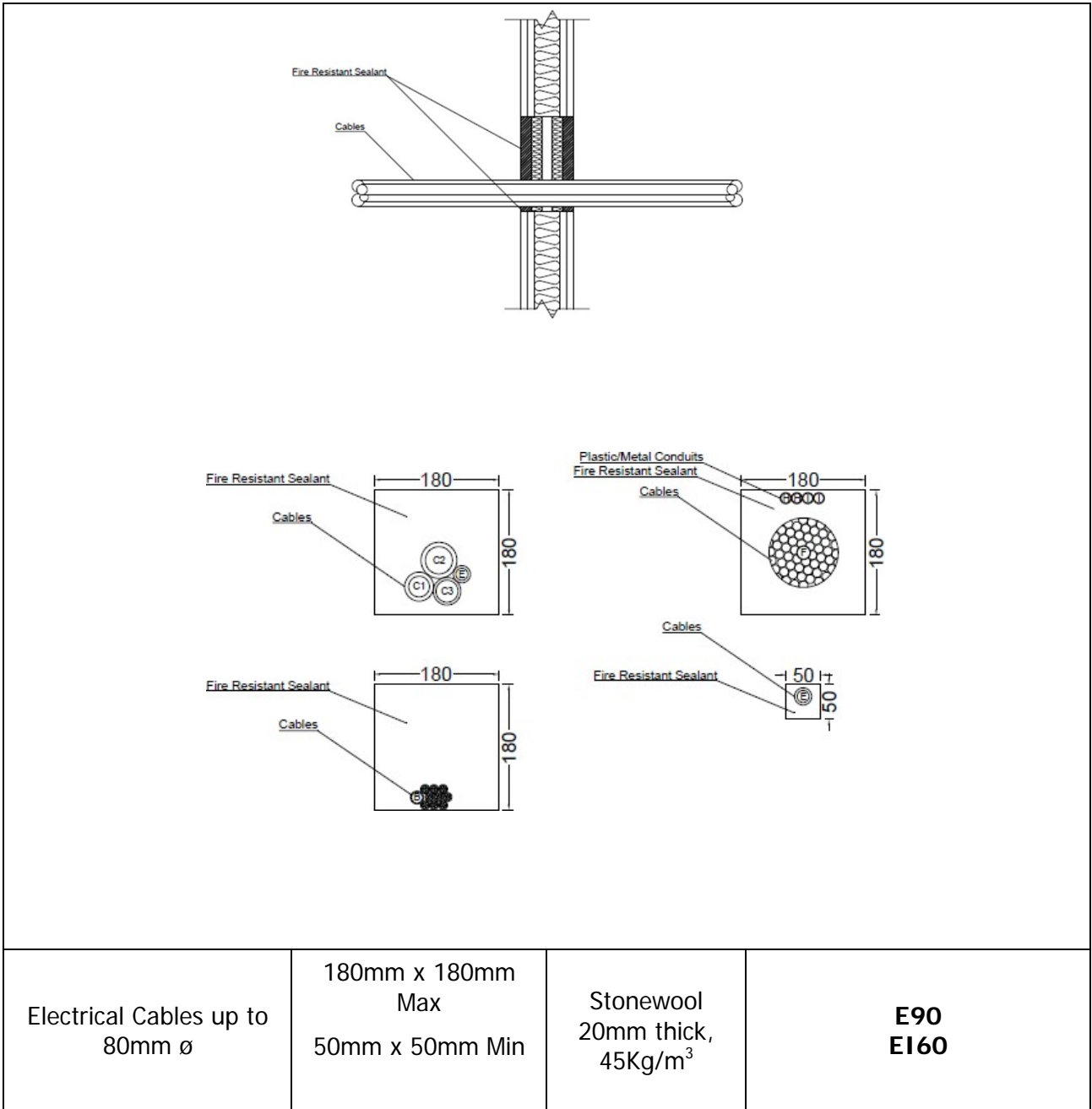
Penetration Specification	fischer FiAM Intumescent Acoustic Mastic (installed both faces)	Backing Material	Classification
Cables up to 21mm	490mm long x 100mm high x 25mm deep	70mm thick, 80Kg/m ³	E120 EI90
Perforated Cable Tray 450mm x 50mm			
Cables up to 21-50mm	200mm long x 100mm high x 25mm deep	N/A	E90 EI60

A1.3 fischer FiAM Intumescent Acoustic Mastic Penetration Seals. Min 100 mm thick Flexible or Rigid Wall - Pipes

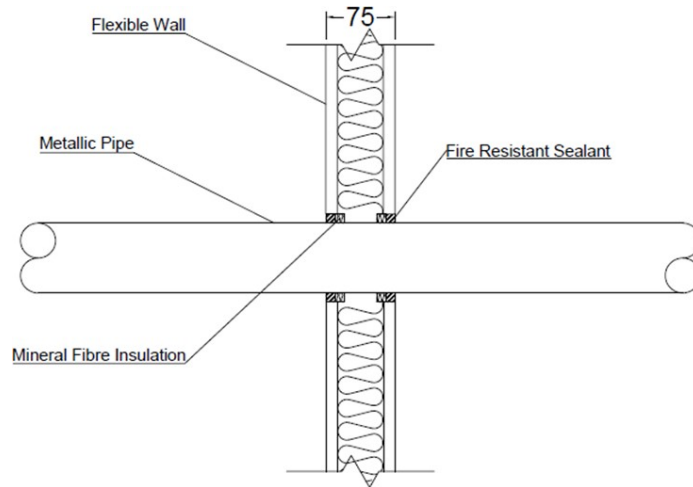


Penetration Specification	fischer FiAM Intumescent Acoustic Mastic (installed both faces)	Backing Material	Classification
Steel Pipe 42mm \varnothing , 2.8mm – 14.2mm wall thickness	10mm annulus x 25mm deep	N/A	E120 C/U EI45 C/U
Steel Pipe 114mm \varnothing , 3.0mm – 14.2mm wall thickness			E120 C/U EI20 C/U
Steel Pipe 42-115mm \varnothing , 3.0mm – 14.2mm wall thickness			E120 C/U EI20 C/U
PVCu Pipe 40mm \varnothing , 3.0 wall thickness*			EI120 C/U

A1.4 fischer FiAM Intumescent Acoustic Mastic Penetration Seals. Min 100 mm thick Flexible or Rigid Wall - Cables

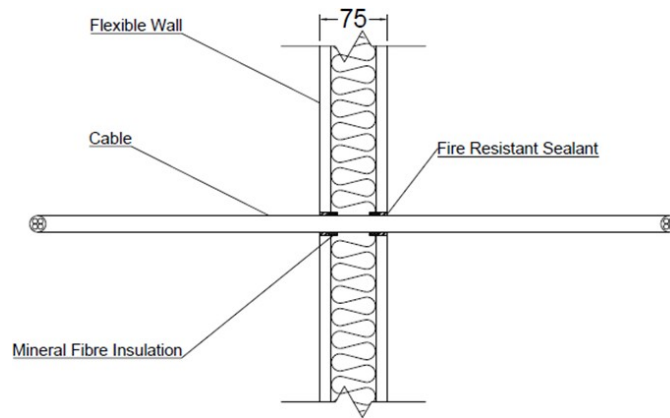


A1.5 fischer FiAM Intumescent Acoustic Mastic Penetration Seals. Min 75 mm thick Flexible or Rigid Wall - Pipes



Penetration Specification	fischer FiAM Intumescent Acoustic Mastic (installed both faces)	Backing Material	Classification
Copper/Steel Pipe 15mm \varnothing , 0.7mm – 7.5mm wall thickness	10mm annulus x 12mm deep	Stonewool 10mm deep 45kg/m ³	E90 C/U EI60 C/U
Copper/Steel Pipe 15-54mm \varnothing , 1.2mm – 7.5mm wall thickness			E90 C/U
Steel Pipe 15mm \varnothing , 1.0mm – 14.2mm wall thickness			EI90 C/U
Steel Pipe 15-76mm \varnothing , 2.0mm – 14.2mm wall thickness			E90 C/U EI20 C/U

A1.6 fischer FiAM Intumescent Acoustic Mastic Penetration Seals. Min 75 mm thick Flexible or Rigid Wall – Cables



Penetration Specification	fischer FiAM Intumescent Acoustic Mastic (installed both faces)	Backing Material	Classification
1 x 'B' Cable	25mm ø aperture	Stonewool 50mm thick, 45Kg/m ³	E90 EI60