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European Technical Assessment

ETA 14/0388
 of 7/10/14

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	fischer FCPS Coated Panel System
Product family to which the construction product belongs	Fire Stopping and Sealing Product Penetration Seals
Manufacturer	Fischerwerke GmbH & Co Weinhalde 14-18 72178 Waldachtal Germany
Manufacturing plant(s)	E/091
This European Technical Assessment contains	15 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) fischer FCPS Coated Panel System is a coated mineral wool board used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of single or multiple services.
- 2) fischer FCPS Coated Panel System is supplied coated on both faces. The board is then cut and friction fit into the aperture, prior to being inserted into the aperture in the wall.
- 3) fischer FCPS Coated Panel System are 50mm thick and supplied in overall dimensions 1200mm x 600mm with a density of 140kg.m³.
- 4) fischer FiAM Intumescent Acoustic Mastic is required to seal all joints and junctions during the sealing process. fischer FiAM Intumescent Acoustic Mastic is subject to a separate ETA referenced 14/0378 & 14/0379
- 5) fischer FiGM PFS+ Intumescent Graphite Sealant is required to seal around specific services (See Annex C). fischer FiGM PFS+ Intumescent Graphite Sealant is subject to a separate ETA referenced ETA 14/0381.

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 fischer FCPS Coated Panel System 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 FCPS Coated Panel System may be used to provide a penetration seal in, are as follows:

Rigid walls: The wall 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 wall must have a minimum thickness of 100 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 100 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 FCPS Coated Panel System 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) The system fischer FCPS Coated Panel System may be used to seal apertures in the separating element up to 730mm wide by 1200mm high or 600mm x 600mm dependant on the configuration. The minimum permitted separation between adjacent seals/apertures is 200mm.
- 5) Pipes must be installed singular, cables require no minimum separation.
- 6) Services in walls shall be supported at maximum 250mm from the face of the separating element.
- 7) The provisions made in this European Technical Assessment are based on an assumed working life of the fischer FCPS Coated Panel System of 10 years, provided that the conditions laid down in the product data sheet 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	See Clause 3.1
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	See clause 3.3
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_i;C_{tr})= 24(-2;-3)
		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 fischer FCPS Coated Panel System is classified 'F' in accordance with EN 13501-1.

3.2 Resistance to fire

System fischer FCPS Coated Panel System 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 fischer FCPS Coated Panel System 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, 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 Thermal Defence Wrap. See Annex C

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.

3.3 Air permeability

System Fischer FCPS Coated Panel System has been tested in accordance with BS EN 1314-1 to provide the following results:

Product tested				
Pressure (Pa)	Results under positive chamber pressure		Results under negative chamber pressure	
	Leakage (m ³ /h)	Leakage (m ³ /m ² /h)	Leakage (m ³ /h)	Leakage (m ³ /m ² /h)
50	0.6	0.8	1.1	1.5
100	1.0	1.4	1.3	1.8
150	2.8	3.9	1.5	2.1
200	3.8	5.3	1.9	2.6
250	4.5	6.3	2.0	2.8
300	5.0	6.9	2.4	3.3
450	5.1	7.1	1.9	2.6
600	6.7	9.3	2.2	3.1

3.4 Water permeability

No performance determined



3.5 Dangerous substances

Fischerwerke GmbH & Co is required to submit a written declaration stating whether or not the fire stopping and fire sealing product contains dangerous substances according to European and national regulations, when and where relevant in the Member States of destination, and shall list these substances.

Fischerwerke GmbH & Co have presented a declaration that Product fischer FCPS Coated Panel System is in compliance with Council Directive 76/769/EEC of 27th July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (incl. all amendments and adaptations).

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 FCPS Coated Panel System material 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.

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

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

R_w (C;Ctr)= 24(-2;-3)

3.10 Thermal Properties

No performance determined.

3.11 Water vapour permeability

No performance determined.



3.12 Durability and serviceability

fischer FCPS Coated Panel System has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z₁ use category specified in ETAG 026-3 (used as European Assessment Document, EAD), 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 3.1.14 relating to the European technical assessment ETA 14/0382 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 3.1.14 relating to the European Technical Assessment 14/0388.

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

fischer FCPS Coated Panel System

] detailed specification of the product is contained in document "Evaluation Report" relating to the European Technical Approval ETA – 14/0388 issued on 7/10/14, of fischer FCPS Coated Panel System which is a non-public part of this ETA.



Coated Panel System - FCPS

Overview



ISO 11600

Application examples:
Cables / cable trays through various types of walls and floor assembly
Metallic and non metallic pipes through walls and Doors
Air ducts with dampers through wall or Door assembly

Approved to:

British Standard

BS 476 - 20

BS 476: Part 22

BS EN 1366-3

BS EN ISO 140-3:1995

Approved CF 5035

The laboratory measurement of airborne sound insulation of building elements

Application area:

- Small and Large openings
- Cables / Cable trays
- Steel Ducts with Dampers
- Metallic and Non-metallic pipes

Product Description

Features / uses

- Approved for light partition walls
- Can be installed dry
- No coatback required for services
- Excellent acoustic properties
- 4 hours integrity and 2 hours insulation



fischer Coated Panel System FCPS is a rock fibre core coated with ablative sealant FPC - fischer Panel Coating.

FCPS is designed to provide effective and efficient firestopping seal in both vertical and horizontal applications. FCPS also helps to maintain the sound reduction index of a structure.

FCPS has been tested to BS 476 Part 20 and 22, and can provide up to 4hours integrity and 2hour insulation. Tested in wide range of applications, FCPS will allow additional services to be added or removed and will accommodate thermal and mechanical movement of services.

Formulated to be asbestos and halogen free, the FCPS is unaffected by oil, fungus moisture, vermin and weather.

fischer Panel Coating - FPC can be used to adhere sections of FCPS board, when jigsaw assembly is required and can also be used to enhance smoke and acoustic performance.

Technical Data

Dimensions	1200mm x 600mm x 50mm
Density of board	140 kg/m ³
Coating Thickness	1mm DFT
Fire Resistance	4 hours - BS476 Part 20 and 22
Acoustic Performance	23 dB mean production up to 56 dB reduction (with one 50mm FCPS board). 29 dB mean reduction up to 65 dB reduction (with two 50mm FCPS board)
Thermal Conductivity (U Value)	0.034 W/mK at 10°C
Maximum Size of seal	Wall 5.76m ² , Floor 2.88m ²
Maximum size - Unsupported	1.2m x 1.2m (no services)
Mechanical support	30mm x 30mm x 1.6mm steel angle
Density of Panel coating FPC	1.25 - 1.3 g/cm ³
Panel coating FPC coverage	3.5 L/m ²
Shelf-life of Board	n/a
Shelf-life of Panel coating FPC	12 months



Annex C

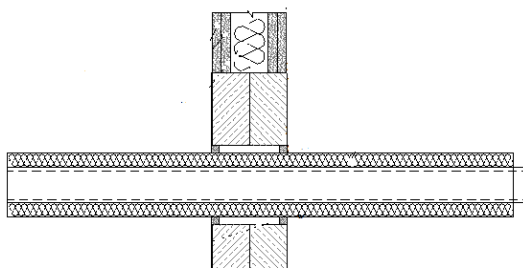
Resistance to Fire Classification of fischer FCPS Coated Panel System

C.1.1 Flexible and Rigid wall constructions according to 1.2.1 with wall thickness of minimum 100 mm

C.1.2 Penetration seal with fischer FCPS Coated Panel System installed centrally within the wall

Construction details:

- Continuous/sustained insulated mettalic pipes installed at any postion within the wall(min. seperation 50mm from seal edges).
- Double layer of fischer FCPS Coated Panel System installed centrally within the wall.
- Max. Aperture size 730mm wide x 1200mm high



C.1.3

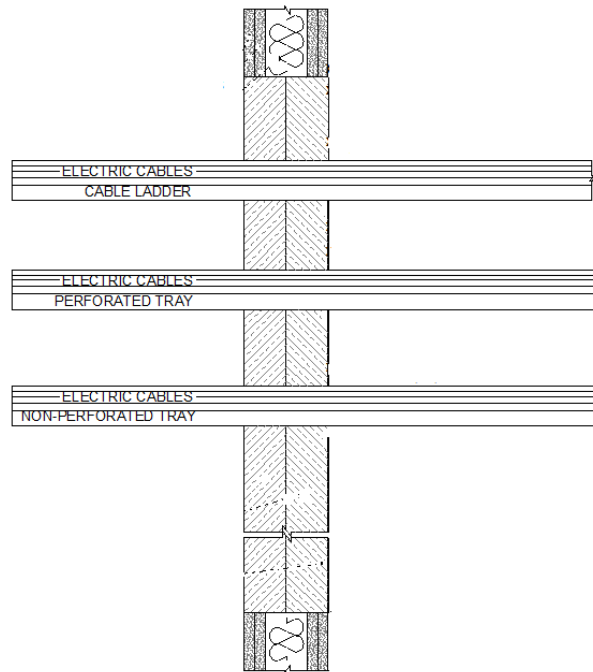
Service(s)	Insulation	Seal	Classification
Mild Steel or Copper			
40mm diameter and 1.5 – 14.2 mm wall	20mm thick foil faced glass wool insulation (min 80Kg/m ³)	15mm deep x 15mm wide annulus fischer FIGM PFS+ Intumescent Graphite Sealant to both faces seal	90 U/C EI 60 U/C
40-159mm diameter and 2.3 – 14.2 mm wall	30mm thick foil faced glass wool insulation (min 80Kg/m ³)		EI 60 U/C
Service(s)	Insulation	Seal	Classification
Mild Steel			
40mm diameter and 1.7 – 14.2 mm wall	20mm thick foil faced glass wool insulation (min 80Kg/m ³)	15mm deep x 15mm wide annulus fischer FIGM PFS+ Intumescent Graphite Sealant to both faces of the seal	E 90 U/C EI 60 U/C
40-150mm diameter and 2.3 – 14.2 mm wall	30mm thick foil faced glass wool insulation (min 80Kg/m ³)		EI 60 U/C



C2.1 Flexible and Rigid wall constructions according to 1.2.1 with wall thickness of minimum 100 mm

C.2.2 Penetration seal with fischer FCPS Coated Panel System installed centrally within the wall

- Cables fitted at any position within the aperture (min. 50mm from edge seal)
- Double layer of fischer FCPS Coated Panel System installed centrally within the wall.
- Max. Aperture size 730mm wide x 1200mm high



C.2.3

Service(s)	Classification
Electrical cables up to 21mm dia	EI 60
Electrical cables 22mm to 80mm dia	E 60, EI 45
Cable Trays and Ladders	EI 60
100 mm diameter bundle telecommunication cable type "F"	EI 60
Unsheathed electrical cables up to 17mm dia	E 60, EI 30
Unsheathed electrical cables 18-24mm dia	E 60, EI 15
Steel or Copper Conduits up to 16mm	E 60, EI 15
Plastic conduits up to 16mm	EI 60



C3.1 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm

C.3.2 Penetration seal with fischer FCPS Coated Panel System installed centrally within the wall

- Cables fitted at any position within the aperture (min. 50mm from edge seal)
- Single layer of fischer FCPS Coated Panel System installed centrally within the wall.
- Max. Aperture size 600mm wide x 600mm high
- 6mm thick Thermal Defense Wrap insulation around cables to a distance of 300mm from the seal

C.3.3

Service(s)	Classification
Electrical cables up to 80mm dia	EI 60
Cable Trays and Ladders	EI 60
100 mm diameter bundle telecommunication cable type "F"	EI 60
Unsheathed electrical cables up to 24mm dia	EI 60

