ETA-Danmark A/S
Göteborg Plads 1
DK-2150 Nordhavn
Tel. +45 72 24 59 00
Internet www.etadanmark.dk

Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

European Technical Assessment ETA-23/0164 of 2023/11/28

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S	
Trade name of the construction product:	fischer FFB-ES Plus
Product family to which the above construction product belongs:	Fire Stopping, Fire Sealing & Fire Protective Products. Fire Retardant Products
Manufacturer:	fischerwerke GmbH & Co. KG Klaus-Fischer-Str. 1 DE-72178 Waldachtal Telephone: +49 7443 120 www.fischer-international.com
Manufacturing plant:	fischerwerke
This European Technical Assessment contains:	9 pages including 2 annexes which form an integral part of the document
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

II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

fischer FFB-ES Plus is a one-part water based acrylic spray system 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.

fischer FFB-ES Plus is supplied in buckets and can be sprayed or troweled as a surface-mounted system on a suitable backing material with overlap as specified in Annex B of this document.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

The intended use of fischer FFB-ES Plus is to reinstate the fire resistance performance of rigid wall constructions where they are penetrated by various cable supports and cables.

The specific elements of construction that the system fischer FFB-ES Plus may be used to provide a penetration seal in, are as follows:

Rigid Walls:
The wall must have a minimum thickness of 115 mm and comprise concrete, aerated concrete, or masonry, with a minimum density of 650 kg/m^3.

The individual requirements for walls and floors are detailed in the respective systems in Annex B of this document.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

The fischer FFB-ES Plus may be used to provide a penetration seal with cables, and cable trays and ladders (for details see Annex B of this document).

fischer FFB-ES Plus is fire tested to EN 1366-3.

The use category of the fischer FFB-ES Plus is Type X: Intended for use in conditions exposed to weathering. The installation guidelines for fischer FFB-ES Plus in the technical datasheet accompanying this product must be followed.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the spray system of 25 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 intended 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 selecting the appropriate 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.

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (BWR 2)	
Reaction to fire	The product is classified as **D-s1, d1** in accordance with EN13501-1, and the EC Delegated regulation 2016/364/EU.
Resistance to fire	**See Annex B**
3.3 Hygiene, Health and the Environment (BWR 3)	
Air permeability	**No leakage at up to 600 Pa**
Water permeability	**No water penetration at up to 600 Pa**
Content, emission and/or release of dangerous Substances*	Release scenario: **IA1**

	3 days [µg/m^3]	28 days [µg/m^3]
SVOC	0	0
VOC	< 5	< 5

3.4 Safety and accessibility in use (BWR4)	
Mechanical resistance and stability	**No performance assessed**
Resistance to impact/movement	**No performance assessed**
Adhesion	**No performance assessed**
Durability	Use category: **Type X**
3.5 Protection against noise (BWR5)	
Airborne sound insulation	**Rw (C; Ctr) = 44 (-4; -9) dB**
3.6 Energy economy and heat retention (BWR6)	
Thermal properties	**No performance assessed**
Water vapour permeability	**No performance assessed**

See additional information in section 3.8-3.9

*) 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.

3.8 Methods of verification

The product is fully covered by EAD 350454-00-1104 Firestopping and fire sealing products, Penetration Seals as a coating, and fulfils the requirement for use category: X - Intended for use in conditions exposed to weathering. Products that meet requirements for type X, meet the requirements for all other types.

3.9 General aspects related to the fitness for use of the product.

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

The fischer FFB-ES Plus for firestopping and fire sealing purposes are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Attestation and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

4.1 AVCP system

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 Regulation (EU) No 305/2011) is: **1.**

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2023-11-28 by

Thomas Bruun
Managing Director, ETA-Danmark

Annex A

References

A.1 References to standards mentioned in the ETA:

EN 1366-3:2022	Fire resistance tests for service installations - Part 3: Penetration seals
EN 13501-1:2018	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN 13501-2:2016	Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests

A.2 Other reference documents:

EAD 350454-00-1104	European Assessment Document: Fire Stopping and Fire Sealing Products, Penetration Seals, September 2017
EOTA TR 024	EOTA Technical Report: Technical description and assessment of reactive products effective in case of fire, Edition November 2006, Amended August 2019
Council Directive 67/548/EEC	Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances

Table of Content

Annex B

Resistance to Fire Classification of fischer FFB-ES Plus

B.1 Rigid wall construction with minimum thickness of 115 mm

B.1.1 Double sided penetration seal with cables supports (cable arrangement L)

Penetration Seal:	Cable supports, and cables sealed with fischer FFB-ES Plus sealant to both sides of the wall, backed with stone wool insulation, rigid wall thickness ≥115 mm, flush with surface of wall

Construction details:

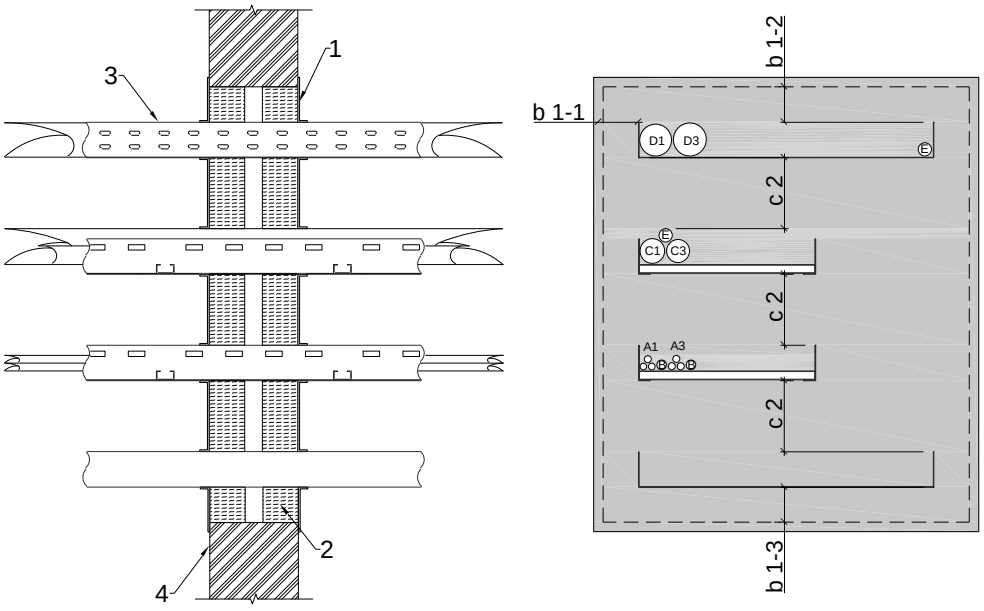

Figure not to scale

Key:

1. FiAM Plus
2. Backing material
3. Cable support
4. Wall

Table B.1.1

Type of penetrant	Cable type	Maximum aperture size	Sealant thickness	Seal overlap on penetrant	Backing material	Classification
Service option L	Sheathed cables / telecommunication cables / optical fibre cables up to a max. outer diameter of 80 mm with or without cable carrier	750 x 1100 mm	≥1,6 mm*	≥13 mm*	stone wool ρ ≥60 kg/m³, ≥50 mm thick from both sides**	E 45 EI 30

Minimum working clearance: Distance between cable / cable carrier and the aperture edge

b 1-1 – Distance between a cable/the cable carrier and the aperture edge – aside (≥ 50mm)

b 1-2 – Distance between a cable/the cable carrier and the aperture edge – above (≥ 50mm)

b 1-3 – Distance between a cable/the cable carrier and the aperture edge – underneath (≥ 50mm)

c 2 – Distance between a cable/cable carrier and other cables/cable carriers – underneath (≥ 250mm)

Cable support (with cable carrier) ≤ 250mm form surface of specimen

Cable support (without cable carrier) ≤ 150mm form surface of specimen

* wet film thickness

** ≥15 mm air gap between layers of insulation

fischer FFB-ES Plus	**Annex B.1.1** of European Technical Assessment ETA-23/0164
Double sided penetration seal with cables supports (cable arrangement L)	