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European Technical
Assessment

ETA 15/0799
of 01/12/15

| 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 | FISCHER FFRS Fire Rated Silicone |
| Product family to which the construction product belongs | Fire Stopping and Sealing Product , Linear Joint and Gap Seal |
| Manufacturer | Fischerwerke GmbH & Co Klaus-Fischer-Straße 72178 Waldachtal Germany |
| Manufacturing plant(s) | E/091 |
| This European Technical Assessment contains | 16 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 FFRS Fire Rated Silicone is a silicone based sealant used to form linear gap seals where gaps are present in floor and wall constructions.
- 2) The FISCHER FFRS Fire Rated Silicone Sealant is supplied in liquid form contained within 310ml & 830ml cartridges, 600ml sausages and 200litre drums.
- 3) PE backing rod, reference PE (RtF class F) is utilised as a depth gauge.

External use- ETAG 026-3 (used as European Assessment Document EAD) Type X

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

2.1 Intended Use

The intended use of system FISCHER FFRS Fire Rated Silicone Sealant is to reinstate the fire resistance performance of gaps in and joints between joints in rigid floor constructions.

- 1) The specific elements of construction that the system FISCHER FFRS Fire Rated Silicone Sealant may be used to provide a gap or joint 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 wall 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 system FISCHER FFRS Fire Rated Silicone Sealant may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex C).
- 3) The maximum permitted joint/gap width for system FISCHER FFRS Fire Rated Silicone Sealant is 50 mm.
- 4) The maximum movement capability of system FISCHER FFRS Fire Rated Silicone Sealant is $\leq 7.5\%$
- 5) The provisions made in this European Technical Assessment are based on an assumed working life of the FISCHER FFRS Fire Rated Silicone Sealant of 10 years, 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 X: Intended for use in conditions exposed to weathering.

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 3: 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 | Classification E 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 | No performance determined |
| | | 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 | X |

3.1 Reaction to fire

FISCHER FFRS Fire Rated Silicone Sealant is classified 'E' in accordance with EN 13501-1.



3.2 Resistance to fire

FISCHER FFRS Fire Rated Silicone Sealant has been tested in accordance with BS EN 1366-4: 2006 based upon the test results and the field of direct application specified within EN 1366-4: 2006, the system FISCHER FFRS Fire Rated Silicone Sealant has been classified in accordance with EN 13501-2, as given in Annex C:

The seals may only be used in the elements of construction described in Annex C and against the substrates described in Annex C.

Provisions shall be taken such that floor joint seals cannot be stepped on e.g. by covering with wire mesh or floor finishes.

3.3 Air permeability

| Test pressure differential Pa | Air permeability: m ³ /h per linear metre of seal | |
|----------------------------------|---|---|
| | Specimen 1 1m straight length of seal (Linear length 1000 mm) | Specimen 2 'T' shaped lengths of seal (Linear length 1475 mm) |
| 50 | 0.02 | 0.01 |
| 300 | 0.35 | 0.13 |
| 600 | 0.42 | 0.26 |

Notes:

1. The values in the table above are the fully corrected figures
2. Air leakage was detected between the silicone sealant and the substrate.
3. Zero detectable air leakage through the sealant
4. Specimen 1 showed most air leakage while Specimen 2 was the most airtight.

3.4 Water permeability

No performance determined

3.5 Dangerous substances

The declaration satisfies the Essential Requirement 3: Hygiene, health and environment: 5: Release of dangerous substances of EOTA ETAG N° 026: Part 3.

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

No performance determined.

3.10 Water vapour permeability

No performance determined.

3.11 Durability and serviceability

FISCHER FFRS Fire Rated Silicone Sealant has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type X use category specified in ETAG 026-3 (used as European Assessment Document, EAD), and the results of the tests have demonstrated suitability for linear joint seals intended for use in conditions exposed to weathering.

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 11.11.14 relating to the European Technical Assessment ETA- 15/0799 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 linear joint 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 linear joint seal

- Construction of the linear joint 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.



The manufacturer shall, on the basis of a contract, involve a body which is approved for the tasks referred to in section 3.1 in the field of linear joint seals seals in order to undertake the actions laid down in section 3.3. For this purpose, the "control plan" referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body or bodies involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of the European technical assessment ETA 15/0179.

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 11.11.14 relating to the European Technical Assessment 15/0799.

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 3 | Guideline For European Technical Approval of Fire Stopping and Fire Sealing Products, Part 3: Linear Joint Seals (used as European Assessment Document, EAD) |



Annex B

Description of Product and Product Literature

FISCHER FFRS Fire Rated Silicone

A detailed specification of the product is contained in document "Evaluation Report" relating to the European Technical Approval ETA – 15/0799 issued on 01/12/15, of The FISCHER FFRS Fire Rated Silicone Sealant which is a non-public part of this ETA.



Annex C

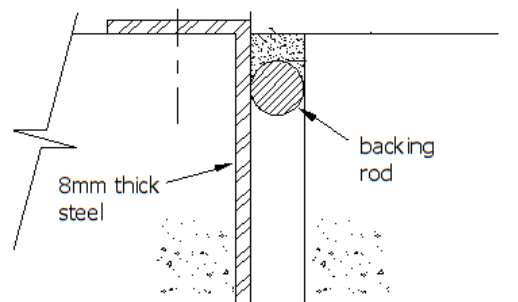
Resistance to Fire Classification of FISCHER FFRS Fire Rated Silicone

C.1 Rigid floor constructions according to 2.2.1 with floor thickness of minimum 150 mm

C.1.1 Linear joint or gap seal, horizontally orientated with sealant to the unexposed face.

Construction details:

- PE Backer installed as depth gauge



C.1.1.1

| FISCHER FFRS Fire Rated Silicone Sealant Linear Joint Seals in Rigid Floors 150 mm thick (min.) – | | | | |
|--|----------------------|------------|---------------------|---------------------------------------|
| Depth Sealant | Backing | Substrates | Seal Orientation | Classification |
| 2:1 Ratio 2= width 1= depth | PE Backing Rod | AAC-Steel | Unexposed Face | E180 EI45– H – X – F – W 12-30 |
| | | | | E120 EI30– H – X – F – W 31-50 |



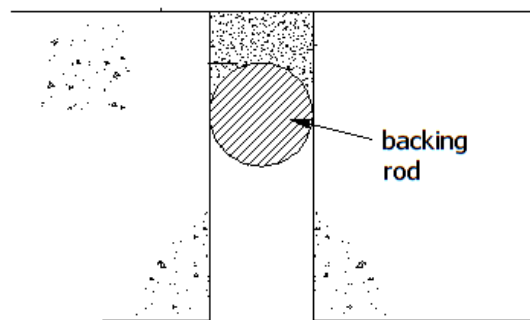
Resistance to Fire Classification of FISCHER FFRS Fire Rated Silicone Sealant

C.2 Rigid floor constructions according to 2.2.1 with floor thickness of minimum 150 mm

C.2.1 Linear joint or gap seal, horizontally orientated with sealant to the unexposed face.

Construction details:

- PE Backer installed as depth gauge



C.2.1.1

| FISCHER FFRS Fire Rated Silicone Sealant Linear Joint Seals in Rigid Floors 150 mm thick (min.) – | | | | |
|--|----------------------|------------|---------------------|--|
| Depth Sealant | Backing | Substrates | Seal Orientation | Classification |
| 2:1 Ratio 2= width 1= depth | PE Backing Rod | AAC-AAC | Unexposed face | E180 EI60 – H – X – F – W 12-30 |
| | | | | E240 EI90– H – X – F – W 31-50 |



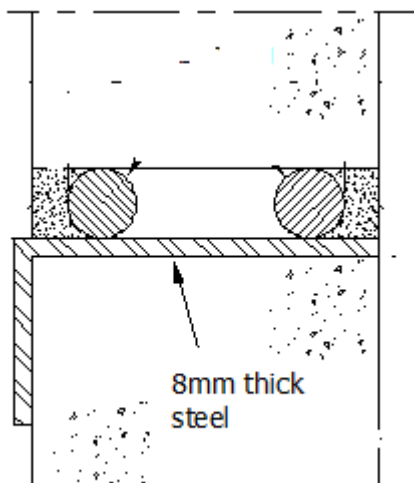
Resistance to Fire Classification of FISCHER FFRS Fire Rated Silicone Sealant

C.3 Rigid wall constructions according to 2.2.1 with wall thickness of minimum 150 mm

C.3.1 Linear joint or gap seal, horizontally orientated with sealant to both faces.

Construction details:

- PE Backer installed as depth gauge



C.3.1.1

FISCHER FFRS Fire Rated Silicone Sealant Linear Joint Seals in Walls 150 mm thick (min.) –

| Depth Sealant | Backing | Substrates | Seal Orientation | Classification |
|-----------------------------------|----------------|------------|------------------|---------------------------------|
| 2:1 Ratio 2= width 1= depth | PE Backing Rod | AAC-Steel | Both faces | E240 EI60 – T – X – F – W 12-29 |
| | | | | E240 EI90 – T – X – F – W 30-50 |



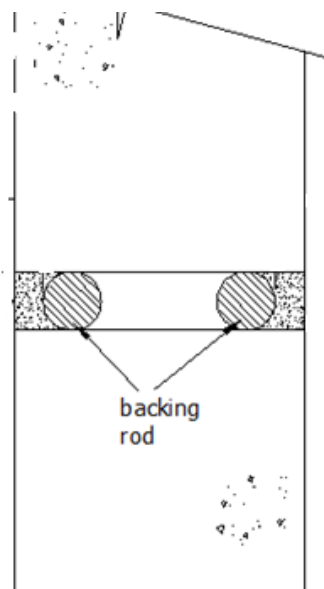
Resistance to Fire Classification of FISCHER FFRS Fire Rated Silicone Sealant

C.4 Rigid wall constructions according to 2.2.1 with wall thickness of minimum 150 mm

C.4.1 Linear joint or gap seal, horizontally orientated with sealant to both faces.

Construction details:

- PE Backer installed as depth gauge



C.4.1.1

FISCHER FFRS Fire Rated Silicone Sealant Linear Joint Seals in Walls 150 mm thick (min.) –

| Depth Sealant | Backing | Substrates | Seal Orientation | Classification |
|-----------------------------------|----------------|------------|------------------|-----------------------------|
| 2:1 Ratio 2= width 1= depth | PE Backing Rod | AAC-AAC | Both faces | EI240 – V – X – F – W 12-50 |
| | | | | EI240 – T – X – F – W 12-30 |



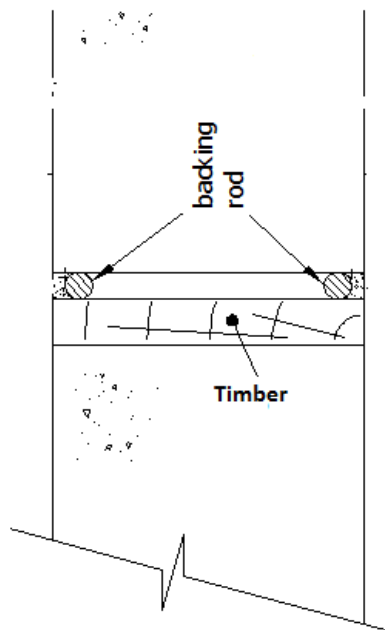
Resistance to Fire Classification of FISCHER FFRS Fire Rated Silicone Sealant

C.5 Rigid wall constructions according to 2.2.1 with wall thickness of minimum 150 mm

C.5.1 Linear joint or gap seal, horizontally orientated with sealant to both faces.

Construction details:

- PE Backer installed as depth gauge



C.5.1.1

| FISCHER FFRS Fire Rated Silicone Sealant Linear Joint Seals in Walls 150 mm thick (min.) – | | | | |
|---|----------------|--------------|------------------|------------------------------------|
| Depth Sealant | Backing | Substrates | Seal Orientation | Classification |
| 2:1 Ratio 2= width 1= depth | PE Backing Rod | AAC-Softwood | Both faces | EI120 – V – X – F – W 12-30 |
| | | AAC-Hardwood | | EI120 – V – X – F – W 12-30 |

