Deutsches Institut für Bautechnik

Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

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# European Technical Assessment ETA-17/0815 of 23 August 2022

English translation prepared by DIBt - Original version in German language

**General Part**

| | |
|---|---|
| Technical Assessment Body issuing the European Technical Assessment: | Deutsches Institut für Bautechnik |
| Trade name of the construction product | Kerafix® Flexlit |
| Product family to which the construction product belongs | Intumescent products for fire sealing and fire stopping purposes |
| Manufacturer | Rolf Kuhn GmbH<br>Jägersgrund 10<br>57339 Erndtebrück<br>DEUTSCHLAND |
| Manufacturing plant | 12 |
| This European Technical Assessment contains | 6 pages including 1 annex which forms an integral part of this assessment |
| This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of | EAD 350005-00-1104, edition May 2015 |
| This version replaces | ETA-17/0815 issued on 14 March 2019 |



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## Specific Part

### 1 Technical description of the product

Object of this European Technical Assessment (ETA) is the intumescent construction product "KERAFIX Flexlit" and its modifications.

In case of fire exposed to high temperatures, the intumescent products expand and generate dense foam. This foam seals joints and gaps, closes voids and openings. Thus, the foam restricts the passage and spread of heat, smoke, flames or any combination of these.

The construction product "KERAFIX Flexlit" (non-laminated basic variant) does not generate notable expansion pressure in case of fire.

The flexible intumescent construction product "KERAFIX Flexlit" essentially consist of intumescent substances and binder. It is produced in form of mats and strips of a nominal thicknesses of 1,5 mm to 6,0 mm and any width between 8 mm up to 1000 mm. It is processed by cutting e.g. into strips at the factory[1].

The following modifications are covered by this ETA besides the un-laminated variant named "KERAFIX Flexlit":

- laminated with PVC-foil[2] of different colours on one side; named "KERAFIX Flexlit DF",
- laminated with PE-sellotape[2] on one side, named "KERAFIX Flexlit ZPE",
- laminated with aluminum foil[2] on one side, named "KERAFIX Flexlit AF",
- completely wrapped with textile tape[2], named "KERAFIX Flexlit GE",
- completely wrapped with Polyacryl-foil metalized with aluminum[2], named "KERAFIX Flexlit AE"

All modifications may be additionally finished with a self-adhesive tape[2] on one side.

The construction product is delivered in rolls or may be delivered as factory-made cut or strip.

The technical characteristics relevant for fire sealing and fire stopping effects of the construction product are given in Annex 1.

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

The intumescent construction product "KERAFIX Flexlit" is assessed on the basis of EAD 350005-00-1104[3] as an intumescent product for fire sealing and fire stopping purposes without a specific final use (IU 1).

The construction product and the described modifications are intended to be used as essential components in construction products, construction elements, kits and special assemblies which need to meet requirements concerning the safety in case of fire.

In case of fire, the products delay the heat transfer through fire resistant construction products and construction elements by expanding under the impact of high temperatures and thus restricting the spread of fire.

The performance given in Section 3 is only valid if the construction product "KERAFIX Flexlit" used in accordance with the instructions and the conditions stated in section 3.3.



1 Please note for the use in Germany, that the product only shall be applied fully wrapped or encapsulated.
2 Type, manufacturer and characteristics deposited at DIBt.
3 Official Journal of the EU N° C 378/02 of 13/11/2015

The tests and assessment methods on which this ETA is based, lead to the assumption of working life of the intumescent construction products "KERAFIX Flexlit" and the described modifications in final use of at least 10 years[4].

The indications given on the 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 choosing the right product in relation to the expected economically reasonable working life of the works.

## 3 Performance of the product and references to the methods used for this assessment

### 3.1 Safety in case of fire (BWR 2)

#### 3.1.1 Reaction to fire

| Characteristic | Performance |
|---|---|
| Reaction to fire | Class E in accordance with EN 13501-1[5] |

#### 3.1.2 Resistance to fire

The performance "resistance to fire" shall be determined separately for every final use and shall be classified, if required.

**3.2 Hygiene, health and the environment (BWR 3):** No performance determined (NPD)

**3.3 Safety and accessibility in use (BWR 4):** No performance determined (NPD)

**3.4 Protection against noise (BWR 5):** No performance determined (NPD)

**3.5 Energy economy and heat retention (BWR 6):** No performance determined (NPD)

**3.6 Sustainable use of natural resources (BWR 7):** No performance determined (NPD)

### 3.7 General aspects

Durability testing shall be an integral part of assessing the basic works and performance requirements. The following specific provisions shall be complied with to ensure the durability of the performance for the intended use.

The testing and the assessment of the product performance were carried out for environmental conditions of type X – product intended for use at external conditions of free weathering (rain, frost and UV radiation) - in accordance with EAD 350005-00.1104, clause 1.2.2 and section 2.2.2.7.

Result:

The intumescent construction product "KERAFIX Flexlit" and the described modifications of top 1 can be exposed permanently to end-use conditions of free weathering without having to fear an essential change of the relevant fire sealing and fire stopping properties and the resulting performance.



[4] Results (historical data) of long-term-aging (natural aging at defined indoor climat for 10 years) available

[5] EN 13501-1 Fire classification of construction products and building elements, Part 1 and A1:2009 Classification using test data from reaction to fire tests

## 4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with the European Assessment Document 350005-00-1104, edition of May 2015 the Decision of the Commission N° 1999/454/EC of 22 June 1999 (OJ of the EU L 178 of 14 July 1999, p 42), amended by EC Decision 2001/596/EC of 8 January 2001 (OJ of the EU L 209 of 2 August 2001, p 33) is the legal basis for the determination of the AVCP system. System 1 applies for the assessment and verification of constancy of performance (AVCP).

(See Annex V in conjunction with Article 65 (2) of the Regulation (EU) N° 305/2011) relating to the following table:

| Product | Intended use | Characteristic | System |
|---|---|---|---|
| "KERAFIX Flexlit" and the modifications described in top 1 | Components effective in the view of safety in case of fire used in construction products, elements, kits and assemblies | Reaction to fire properties relevant for the fire sealing and fire stopping effect | **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 Deutsches Institut für Bautechnik.

Issued in Berlin on 23 August 2023 by Deutsches Institut für Bautechnik

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Head of Section

*beglaubigt:*
Dr.-Ing. Dierke

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## ANNEX 1

## CHARACTERISTICS RELEVANT FOR THE FIRE SEALING AND FIRE STOPPING EFFECTS OF THE CONSTRUCTION PRODUCT

**"KERAFIX Flexlit"**

| **Characteristic** | **Test method**[7] | **Range of determined values and tolerances** |
|---|---|---|
| Nominal thickness | EOTA TR 024[8], cl. 3.1.2.1 | 1,5 mm to 6,0 mm<br>(tolerance ± 0,3 mm for each) |
| Density[9] | EOTA TR 024[8], cl. 3.1.4 | Thickness 1,5 mm:<br>700 kg/ $m^3$ ± 10 %<br>Thickness 5 mm:<br>620 kg/$m^3$ ± 10 % |
| Expansion ratio | EOTA TR 024[8], cl. 3.1.11, method 2 at 400 °C for 30 minutes with a top load | 2,0 to 5,5 |

The chemical reaction starts at about 350 °C.



7 Details of the test method are deposited with DIBt

8 EOTA Technical Report 024 "Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products", edition July 2009

9 Differences in density due to the processing