

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-20/0693
of 8 December 2020

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

"BFC - BafuFireCel"

Product family
to which the construction product belongs

Intumescent products for fire sealing and fire stopping
purposes

Manufacturer

CELSION Brandschutzsysteme GmbH
Cäcilienstraße 5
01219 Dresden
DEUTSCHLAND

Manufacturing plant

Bafu Brandschutz- und Sicherheitssysteme GmbH
Dresdener Straße 51
D-02625 Bautzen

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

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Specific Part

1 Technical description of the product

Object of this European technical assessment (ETA) is the intumescent construction product "BFC - BafuFireCel".

In case of fire, exposed to high temperatures the intumescent product expands and generates foam. This foam seals joints and gaps, closes voids and openings and restricts this way the passage and propagation of heat, smoke, flames or any combination of them.

The product "BFC - BafuFireCel" does not generate essential expansion pressure during this foaming reaction.

The construction product "BFC - BafuFireCel" is a viscous, water-based mastic of off-white colour, preferably delivered in pails, cartridges or flexible plastic tubes. The product essentially consists of intumescent substances and a binder. When applied it generates flexible, fluorescent layers which expand in case of fire.

The technical characteristics used for the fire sealing and fire stopping effect of the construction product "BFC - BafuFireCel" are given in Annex 1.

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

The construction product "BFC - BafuFireCel" is assessed on the basis of EAD N° 350005-00-1104, edition May 2015¹ as an intumescent product for fire sealing and fire stopping purposes without specific final use (IU 1).

The construction product "BFC - BafuFireCel" is intended to be used as essential component in, between or on construction products, construction elements, kits and special constructions which meet requirements concerning the safety in case of fire. In case of fire, the product delays the heat transfer through fire resistant construction elements, assemblies or special constructions by expanding under the impact of high temperatures and restricts the spread of fire.

The performance "resistance to fire" shall be tested for the specific final use, if requested.

The performance given in Section 3 is only valid when the intumescent construction product "BFC - BafuFireCel" is used considering the remarks and the boundary conditions of clause 3.3.

The tests and assessment methods on which this European Technical Assessment is based lead to an assumption of working life of the intumescent construction product "BFC - BafuFireCel" in final use of at least 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.

¹ Official Journal of the EU N° C 378/02 of 13 November 2015

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

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Essential characteristic	Performance
Reaction to fire - on mineral substrates (thickness $\geq 9,5$ mm; density ≥ 685 kg/m ³) and substrates classified being class A1 or A2-s1,d0 - on other substrates	in accordance with EN 13501-1 ² class B-s1,d0 class E

3.1.2 Resistance to fire

The performance "Resistance to fire" shall be demonstrated separately for the intended final use if requested.

3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content of dangerous substances	No dangerous substances ³

The detailed chemical composition of the intumescent construction product "BFC - BafuFireCel" was assessed by DIBt and is deposited with DIBt in written form.

3.3 General aspects

The evidence of durability is part of testing the basic works requirements and the achievement of the performance assessed. The durability is only presumed, if the provisions for the intended use are considered.

The assessment of the durability regarding to the product's performance was done for climatic use conditions of type Z₂ - dry in-door use without frost, according to EAD Nr. 350005-00-1104, clause 1.2.2.

Conclusion:

The intumescent construction product "BFC-BafuFireCel" may be used permanently in dry, frost-protected rooms with relative humidity of ≤ 85 % without having to fear essential changes in the relevant fire sealing and fire stopping properties and the resulting performance.

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

In accordance with the European Assessment Document EAD No 350005-00-1104 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. So 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) according to the following table:

² EN 13501-1:2010 Klassifizierung von Bauprodukten und Bauarten zu ihrem Brandverhalten; Teil 1 Klassifizierung mit den Ergebnissen aus den Prüfungen zum Brandverhalten von Bauprodukten

³ In accordance with the Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 (published in the Official Journal of the EU N° L 353 of 31/12/2008, p 1)

Product	Intended use	Characteristic	System
"BFC-BafuFireCel"	Components effective in the view of safety in case of fire used in construction products, construction elements, kits and special constructions	<ul style="list-style-type: none"> - Reaction to fire - properties relevant for the fire sealing and fire stopping effect 	1

5 Technical details necessary for the implementation of System 1 for the Assessment and verification of constancy of performance (AVCP), as provided for in the applicable European Assessment Document

The technical details necessary for the implementation of the system of assessment and verification of constancy of Performance (AVCP) are laid down in the control plan (confidential part of this ETA) deposited at Deutsches Institut für Bautechnik.

Issued in Berlin on 8 December 2020 by Deutsches Institut für Bautechnik

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Head of Section

beglaubigt:
Dr.-Ing. Dierke

ANNEX 1

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

"BFC - BafuFireCel"

Characteristics	Range and tolerances	Test method ⁵
Density (as delivered)	1350 kg/m ³ ± 100 kg/m ³	See control plan
Content of non-volatile components (fresh)	65,0 % ± 5 %	
Loss of mass at a certain temperature (hardened)	55,0 % ± 5 % (at 450°C for 30 minutes)	
Expansion ratio	2,5 to 5,0 (at 300 °C with a top-load for 30 minutes with samples ca. 2 mm thick)	

The foam generating reaction starts at 250°C. The product does not generate remarkable expansion pressure during the foaming.

⁵ Details of the test method are deposited with DIBt.