

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

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European Technical Assessment

ETA-15/0591
of 26 February 2016

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

Exterdens® FB

Product family
to which the construction product belongs

Intumescent products for fire sealing and fire stopping
purposes

Manufacturer

BASF Wolman GmbH
Dr.-Wolman-Straße 31-33
76547 Sinzheim
DEUTSCHLAND

Manufacturing plant

A, B, C, D¹

This European Technical Assessment
contains

6 pages including 1 annex which form an integral part of
this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

European Assessment Document (EAD)
350005-00-1104

¹ The address known at Deutsches Institut für Bautechnik (DIBt)

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Specific Part

1 Technical description of the product

Object of this European Technical Assessment (ETA) is the intumescent construction product "Exterdens[®] FB".

The European Technical Assessment is also valid for the construction product "Exterdens[®] FB" in form of granulate and for strips and profiles equipped at the factory on one side with a self-adhesive tape (SK)².

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. Thus, the foam restricts the passage and the spread of heat, smoke, flames or any combination of these.

The technical characteristics relevant for fire sealing and fire stopping effects of the construction product "Exterdens[®] FB" are given in Annex 1.

The construction product "Exterdens[®] FB" is an intumescent product of anthracite colour, manufactured as granulate or in form of flexible strips and profiles extruded of this granulate. The product essentially consists of intumescent substances and a binder.

The construction product "Exterdens[®] FB" in form of strips and profiles is produced in a factory in nominal thicknesses between 1 mm and 5 mm (each with a tolerance of $\pm 0,2$ mm), several nominal widths (each with a tolerance of $\pm 0,5$ mm) and with a standard length of 100 m. Other dimensions are available on demand.

The intumescent strips and profiles are delivered in coils; the granulate is delivered in bags.

The strips and profiles can be equipped on one side with a self-adhesive tape for fixing the product on the substrate or can be fastened mechanically or by using a suitable adhesive, which is not part of this ETA.

The construction product "Exterdens[®] FB" in form of strips and profiles and the variants equipped with a self-adhesive tape may be cut on demand.

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

The construction product "Exterdens[®] FB" is assessed on the basis of EAD 350005-00-1104³ as an intumescent product for fire sealing and fire stopping purposes without defined final use (IU 1).

The construction product "Exterdens[®] FB" and its variant with a self-adhesive tape are intended to be used as an essential component in construction products, construction elements, assemblies, kits and special constructions which need to meet requirements concerning the safety in case of fire.

In case of fire, the product delays 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 product "Exterdens[®] FB" is used in accordance with the instructions and the conditions stated in section 3.3.

The tests and assessment methods on which this European Technical Assessment is based, lead to the assumption of working life of the intumescent construction product "Exterdens[®] FB" of at least 10 years⁴ in final use.

² type, manufacturer and specific parameters deposited at DIBt

³ Official Journal of the EU N° C 378/02 of 13/11/2015

⁴ results of long-term aging available (natural-aging exposed to weathering for 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.

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

Essential characteristic	Performance
Reaction to fire	Class E in accordance with EN 13501-1 ⁵

The intumescent construction product "Exterdens[®] FB" in the origin variations with and without self-adhesive tape on one side meets the reaction to fire requirements of class E in accordance with EN 13501-1⁵.

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)

Essential characteristic	Performance
Content and release of dangerous substances	No dangerous substances

The detailed chemical composition of the intumescent construction product "Exterdens[®] FB" was assessed by DIBt and is deposited at DIBt.

3.3 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 (exposed to weathering) in accordance with EOTA Technical Report 024⁶ (EOTA TR 024), section 4.2.

Result:

The intumescent construction product "Exterdens[®] FB" can be used under use conditions of type X, without having to fear essential changes in the relevant fire sealing and fire stopping properties and the resulting performance. This assessment includes the in-door use under use conditions of type Y₁, Y₂, Z₁ and Z₂.

If the intumescent construction product "Exterdens[®] FB" under final use conditions is exposed permanently to temperatures above 60 °C, a decrease of expansion pressure in case of fire cannot be excluded.

The over-painting with suitable decorative coatings is possible, if no influence on the foaming behaviour in case of fire is expected (see EOTA TR 024, para 4.3.3). The performance "reaction to fire" shall be determined separately with the intended coating.

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

⁶ EOTA TR 024 Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and products; amended version July 2009

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

In accordance with 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) 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 and the following table:

Product	Intended use	characteristic	System
"Exterdens® FB" strips and profiles with/without self-adhesive tape, granulate "Exterdens® FB"	Components effective in view of safety in case of fire (BWR 2) used in construction products, construction elements, kits and special 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

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

Issued in Berlin on 26 February 2016 by Deutsches Institut für Bautechnik

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beglaubigt:
Dr.-Ing. Dierke

Exterdens® FB

Annex 1

**CHARACTERISTICS RELEVANT FOR THE FIRE SEALING AND FIRE STOPPING EFFECT OF
THE CONSTRUCTION PRODUCT "EXTERDENS® FB"**

Characteristic	Test method	Range and tolerance
Thickness	EOTA TR 024 ⁶ , cl. 3.1.2.1	1,0 mm to 5,0 mm Tolerance for each $\pm 0,2$ mm
Expansion ratio	EOTA TR 024 ⁶ , cl. 3.1.11 Method 2 at 400 °C for 20 minutes,	14,0 to 40,0
Expansion pressure	EOTA TR 024 ⁶ , cl. 3.1.12 Method 4 at 300 °C,	0,50 N/mm ² to 1,80 N/mm ²

The chemical reaction in case of fire starts at ca. 200 °C.