

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-18/1019 of 21 December 2018

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

"Würth intumeszierender Streifen" (intumescent strip)

Product family
to which the construction product belongs

Intumescent products for fire sealing and fire stopping
purposes

Manufacturer

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12-17
74653 Künzelsau
DEUTSCHLAND

Manufacturing plant

Werk 4¹

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

¹ Address known at 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 "Würth intumeszierender Streifen".

In case of fire exposed to high temperatures the intumescent product expands and generates foam. This generated 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 technical characteristics used for fire sealing and fire stopping effect of the construction product "Würth intumeszierender Streifen" are given in Annex 1.

The construction product "Würth intumeszierender Streifen" is a flexible material produced in form of mats and processed into strips of nominal widths between 8 mm and 320 mm (tolerance in width: $\pm 0,5$ mm) and in a range of nominal thickness between 1,0 mm and 8,0 mm (tolerance $\pm 10\%$ of each nominal thickness). The intumescent product may be equipped on one side with a self-adhesive tape² or with a lamination of polyester² foil.

The product essentially consists of intumescent substances and a binder and in final use it may contribute the resistance to fire in case of fire, when used in fire resisting construction products, kits, elements and assemblies.

The product is delivered in coils or rolls or cut into strips, mats, panels or cut-outs of different shape. The product may be cut on-site.

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

The construction product "Würth intumeszierender Streifen" is assessed on the basis of EAD 350005-00-1104 as an intumescent product for fire sealing and fire stopping purposes without specific final use (IU 1).

"Würth intumeszierender Streifen" is intended to be used as essential component in, between or on construction products, assemblies, 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 products and construction elements by expanding under the impact of high temperatures and thus restricting the spread of fire in fire resistant products and assemblies.

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

The performance given in Section 3 is only valid if the intumescent construction product "Würth intumeszierender Streifen" is used considering the remarks and the boundary conditions of clause 3.4.

The test and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the intumescent construction product "Würth intumeszierender Streifen" of at least 10 years³.

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 type, manufacturer and specific parameters deposited with DIBt
³ results of long-term aging (natural-aging) available

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

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Essential characteristic	Performance
Reaction to fire	Class E according to EN 13501-1 ⁴

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

The detailed chemical composition of the intumescent construction product "Würth intumeszierender Streifen" was assessed at DIBt and is deposited with DIBt.

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 testing and the assessment of the product performance were carried out for environmental conditions of type X – product intended for use at conditions exposed to weathering (rain, UV, frost – outdoor use) - in accordance with EOTA Technical Report 024⁵ (EOTA TR 024), section 4.2.3.

The testing and its assessment for climatic use conditions of type X (outdoor application) were carried out in accordance with EOTA Technical Report 024⁵, clause 4.2.

Conclusion:

The intumescent construction product "Würth intumeszierender Streifen" as well as cuts made from may be used under use conditions of type X (outdoor application) without having to fear essential changes in the relevant fire sealing and fire stopping properties and the resulting performance.

Additionally the product was tested under specific conditions according to EOTA TR 024, section 4.3

- Exposure to a constant temperature of 80 °C for 40 days,
- Exposure to solvents (tested with Butylacetat, Butanol, solvent naphtha and fuel)
- Subsequent over-painting (tested with coatings on the basis of acryl dispersion, alkyd resin, polyurethanacryl and epoxide resin,
- Exposure to permanent wetness (water immersion and permanent condensation) for 4 weeks,
- Exposure to intimate contact to plastics (PVC, PE).

The characteristics "expansion ratio" and "expansion pressure" did not change essentially due to the exposure.

⁴ 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

⁵ EOTA TR 024 Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and products; amended version July 2009

English translation prepared by DIBt

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) and the following table:

Product	Intended use	characteristic	System
"Würth intumeszierender Streifen" without /with Polyester foil / self-adhesive tape or cuts of it	Components effective in the view of safety in case of fire (BWR) used in construction 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

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 21 December 2018 by Deutsches Institut für Bautechnik

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beglaubigt:
Dr.-Ing. Dierke

ANNEX 1

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

"Würth intumeszierender Streifen"

Characteristics	Test method ⁶	Range and tolerance
Thickness of strips, mats cuts etc.	TR 024, clause 3.1.2	1,0 mm to 8,0 mm Tolerance: ± 10 % of nominal thickness
Expansion ratio	TR 024, clause 3.1.11 Method 1 at 550 °C for 30 minutes with a top load	nominal thickness 1,5 mm 18,0 to 38,0 nominal thickness 7,0 mm 11,0 to 34,0
Expansion pressure	TR 024, clause 3.1.12 Method 4 at 300 °C	nominal thickness 1,5 mm ≥ 0,80 N/mm ² nominal thickness 7,0 mm ≥ 0,40 N/mm ²

⁶ Details of the test method are deposited with DIBt