

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-23/0008  
of 20 February 2023

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

PROTEC.class PBSDH6849  
PROTEC.class PBSDH6862

Product family  
to which the construction product belongs

Intumescent products for fire sealing and fire stopping  
purposes

Manufacturer

Würth Elektrofachgroßhandel GmbH & Co. KG  
Ludwig-Erhard-Straße 21-39  
65760 Eschborn  
DEUTSCHLAND

Manufacturing plant

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This European Technical Assessment  
contains

7 pages including 2 annexes 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

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) are the intumescent construction products "PROTEC.class PBSDH6849", a one-gang box for fire protective purposes and "PROTEC.class PBSDH6862", a one-gang junction box for fire protective purposes.

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 intumescent construction products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" are pre-formed spray cast elements consisting of an electrically insulating component made of polypropylene (PP) and an anthracite layer on the bottom of the preformed element made of an intumescent material. This material essentially consists of intumescent substances and a binder<sup>1</sup>.

The technical characteristics relevant for fire sealing and fire stopping effects of the construction products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" are summarized in Annex 1.

The described pre-formed elements are produced in standard shapes with standard dimensions as given in Annex 2.1 to 2.3.

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

The intumescent construction products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" are assessed on the basis of EAD N° 350005-00-1104<sup>2</sup> as intumescent products for fire sealing and fire stopping purposes without defined final intended use (IU 1).

The construction products are intended to be used as an essential component for fire protection of walls, ceilings and special constructions 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 products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" consider in use the instructions and the conditions stated in section 3.3.

The verification and assessment methods on which this European Technical Assessment is based, lead to the assumption of working life of the intumescent construction products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" of at least 10 years in final use.

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.

<sup>1</sup> Chemical composition deposited with DIBt  
<sup>2</sup> Official Journal of the EU N° C 378/02 of 13 November 2015

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

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

##### 3.1.1 Reaction to fire

Products	Performance
"PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862"	class E in accordance with EN 13501-1 <sup>3</sup>

##### 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 for the construction element concerned.

#### 3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content of dangerous substances	No dangerous substances <sup>4</sup>

The detailed chemical composition of the intumescent construction products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" was assessed by DIBt and is deposited with DIBt.

#### 3.3 General Aspects

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

The testing and the assessment of the relevant product performance were carried out for environmental conditions of type Z<sub>2</sub> – product intended for use at dry internal conditions without frost (relative humidity between 50 % and 85 % RF and temperatures between +5 °C ± 5 °C and +35 °C ± 5 °C) - in accordance with EAD N° 350005-00-1104; clause 1.2.2.

Result:

The intumescent construction products "PROTEC.class PBSDH6849" and "PROTEC.class PBSDH6862" can be used permanently under use conditions of type Z<sub>2</sub> (dry internal use without frost) 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 N° 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:

<sup>3</sup> EN 13501-1 Klassifizierung von Bauprodukten und Bauarten zu ihrem Brandverhalten; Teil 1 und A1:2009  
Klassifizierung mit den Ergebnissen aus den Prüfungen zum Brandverhalten von Bauprodukten

<sup>4</sup> 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
"PROTEC.class PBSDH6849" "PROTEC.class PBSDH6862"	Components effective in view of safety in case of fire used in walls, ceilings and special assemblies	reaction to fire properties relevant for fire sealing and fire stopping effects	1

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

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 with Deutsches Institut für Bautechnik.

Issued in Berlin on 20 February 2023 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 PRODUCTS

"PROTEC.class PBSDH6849" fire protective one-gang box and  
"PROTEC.class PBSDH6862" fire protective one-gang junction box

Characteristic	Range of determined values and tolerances	Test method <sup>5</sup>
thickness of the box' bottom (2-layers)	6,4 mm ± 0,2 mm	See control plan
Expansion ratio	6,0 bis 8,0	
Loss of mass at a certain temperature	63,5 %± 5 %	

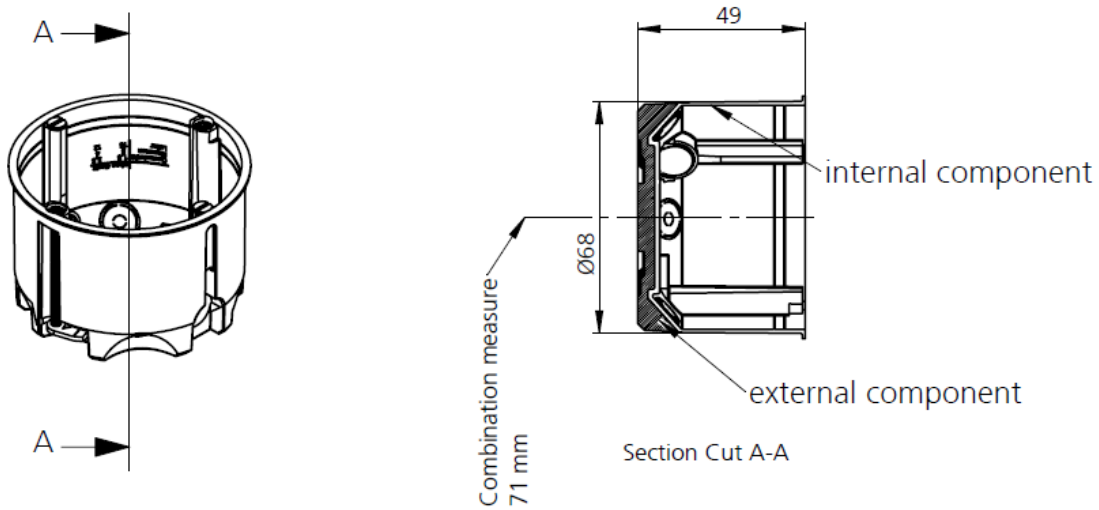
The products do not develop any remarkable expansion pressure during reaction.

<sup>5</sup> Details of the test method are deposited with DIBt

## ANNEX 2

### Standard shape and dimensions (measures in mm)

Fire protective one-gang box "PROTEC.class PBSDH6849"



Fire protective one-gang junction box "PROTEC.class PBSDH6862"

