

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-18/0418
of 15 September 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

"One-gang box HWD 68",
"One-gang junction box HWD 68",
"O-range Protect one-gang box" and
"O-range Protect one gang junction box"

Product family
to which the construction product belongs

Intumescent products for fire sealing and fire stopping
purposes

Manufacturer

KAISER GmbH & Co. KG
Ramsloh 4
58579 Schalksmühle
DEUTSCHLAND

Manufacturing plant

KAISER GmbH & Co. KG
Ramsloh 4
58579 Schalksmühle
DEUTSCHLAND

This European Technical Assessment
contains

8 pages including 3 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

This version replaces

ETA-18/0418 issued on 22 August 2018

The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.

Specific part

1 Technical description of the product

Object of this European Technical Assessment (ETA) are the intumescent construction products "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box".

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 "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" are pre-formed spray cast elements consisting of an electrically insulating component made of red pigmented 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 binder¹.

The technical characteristics relevant for fire sealing and fire stopping effects of the construction products "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" are summarized in Annex 1.

The described pre-formed elements are produced in standard shapes with standard dimensions as given in Annex 2.1 and 2.2.

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

The intumescent construction products "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" are assessed on the basis of EAD N° 350005-00-1104² 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 "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" 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 "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" 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.

¹ Chemical composition deposited with DIBt
² 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
"One-gang box HWD 68" "One-gang junction box HWD 68" "O-range Protect one-gang box" "O-range Protect one-gang junction box"	class E in accordance with EN 13501-1 ³

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 ⁴

The detailed chemical composition of the intumescent construction products "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" 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 Z₂ – 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 "One-gang box HWD 68", "One-gang junction box HWD 68", "O-range Protect one-gang box" and "O-range Protect one-gang junction box" can be used permanently under use conditions of type Z₂ (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.

³ 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

⁴ 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)

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
"One-gang box HWD 68" "One-gang junction box HWD 68" "O-range Protect one-gang box" "O-range Protect one-gang junction box"	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 15 September 2020 by Deutsches Institut für Bautechnik

Otto Fechner
Referatsleiter

beglaubigt:
Dr.-Ing. Dierke

ANNEX 1

CHARACTERISTICS RELEVANT FOR THE FIRE SEALING AND FIRE STOPPING EFFECTS OF THE CONSTRUCTION PRODUCTS

"One-gang box HWD 68",
"One-gang junction box HWD 68",
"O-range Protect one-gang box",
"O-range Protect one-gang junction box"

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

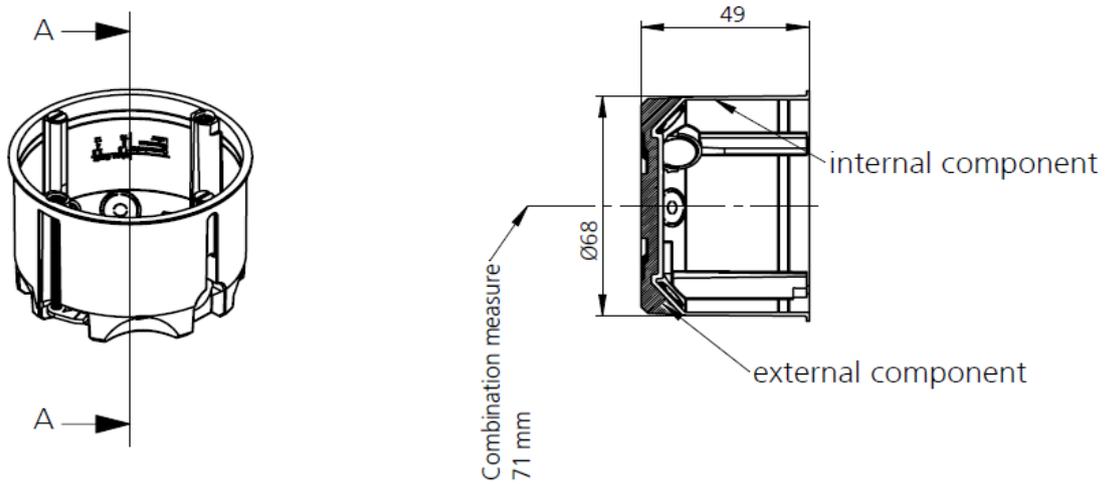
The products do not develop any remarkable expansion pressure during reaction.

⁵ Details of the test method are deposited with DIBt

ANNEX 2.1

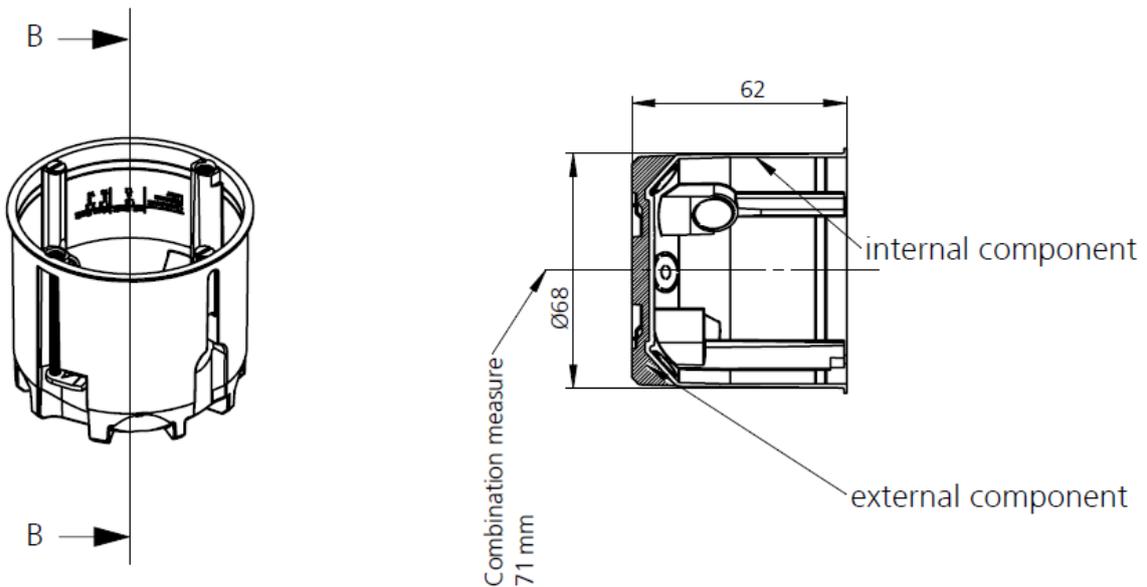
Standard shape and dimensions (measures in mm)

"One-gang box HWD 68" Artikel-No.9463-02



SECTION CUT A-A

"One-gang junction box HWD 68" Artikel-No.9464-02

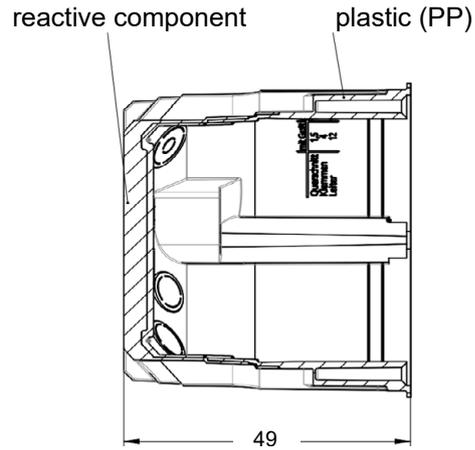
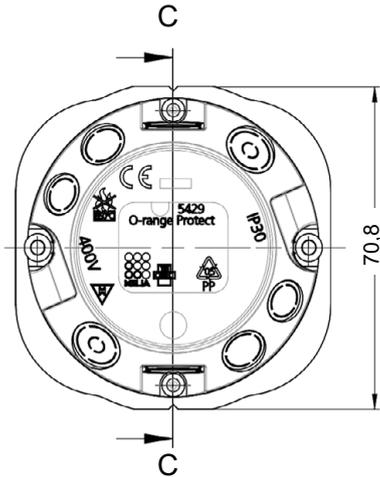


SECTION CUT B-B

ANNEX 2.2

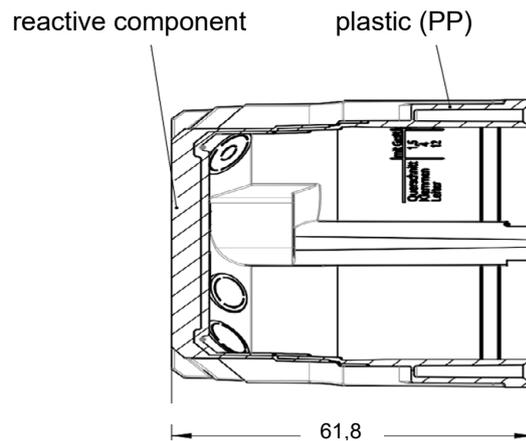
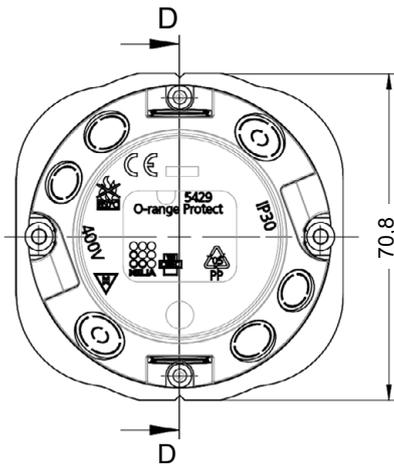
Standard shape and dimensions (measures in mm)

"O-range Protect one-gang box" Artikel-Nr. 5421



SECTION CUT C-C

"O-range Protect one-gang junction box" Artikel-Nr. 5429



SECTION CUT D-D