



## Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

| UK Technical Assessment  | UKTA-0836-22/6253 of 28/09/2022  |
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| Technical Assessment Body issuing the UK Technical Assessment:   | British Board of Agrément  |
| Trade name of the construction product:  | PENTAFLEX KB, PENTAFLEX KB Plus, PENTAFLEX FTS, PENTAFLEX OBS, PENTAFLEX ABS   |
| Product family to which the construction product belongs:  | Product area code: 32<br><br>Coated metal water stop sheet for construction and controlled crack joints in waterproof concrete   |
| Manufacturer:  | PohlCon GmbH<br>Nobelstrasse 51<br>12057 Berlin<br>Germany   |
| Manufacturing plant(s):  | PohlCon GmbH,<br>Am Güterbahnhof 20,<br>79771 Klettgau,<br>Germany   |
| This UK Technical Assessment contains:   | 9 pages including 2 annexes which form an integral part of this assessment   |
| This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of: | UKAD No. 320002-00-0605 <i>Coated metal water stop sheet for construction and controlled crack joints in waterproof concrete</i> |

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## **1 Technical description of the product**

The water stop PENTAFLEX consists of the following components:

- Galvanized metal sheet with the dimensions:  
h = 167 mm, t = 0.6 mm  
h = 80 mm, t = 0.6 mm
- Polymer modified bituminous coating

The metal sheet is fully coated with the bituminous coating.

For installation purposes the water stop is delivered with a protective foil on the bitumen coating and a safety line in longitudinal direction on the metal sheet. Furthermore, there are holders for fixing the water stop during installation and clamps for fixing the overlapping joint between the ends of the water stop.

There are the following types of products:

- PENTAFLEX KB – for horizontal and vertical construction joints
- PENTAFLEX KB Plus – in addition with electrical grounding 1
- PENTAFLEX ABS – with stop end panel for working joints
- PENTAFLEX OBS - for controlled crack joints in in-situ concrete elements
- PENTAFLEX FTS – for controlled crack joints in pre-cast elements

Annex A shows the principles and performances of the product and furthermore the different types of products.

## **2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)**

The water stop is used to seal joints in constructions made of concrete with high resistance to water (watertight concrete) against the penetration of pressing and un-pressing water (e.g. ground water) and to soil moisture.

There are the following classes of intended use:

- Construction joints
- Controlled crack joints for the use in pre-cast elements made of concrete
- Controlled crack joints for the use in in-situ concrete

The performances given in Section 3 are only valid if the water stop is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this UK Technical Assessment is based lead the assumption of working life of the water stop of 50 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 its assessment**

### **3.1 Mechanical resistance and stability (BWR 1)**

Not applicable

### **3.2 Safety in case of fire (BWR 2)**

| <b>Essential characteristic</b> | <b>Performance</b> |
|---------------------------------|--------------------|
| Resistance to fire              | See Annex A1       |

### 3.3 Health, hygiene and the environment (BWR 3)

| Essential characteristic                       | Performance   |
|--|---|
| Content and/or release of dangerous substances | The product does not contain or release dangerous substances according to EOTA TR 034 |
| Watertightness in end use conditions           | See Annex A1  |

### 3.4 Safety and accessibility in use (BWR 4)

Not relevant

### 3.5 Protection against noise (BWR 5)

Not relevant

### 3.6 Energy economy and heat retention (BWR 6)

Not relevant

### 3.7 Sustainable use of natural resources (BWR 7)

No Performance assessed

### 3.8 General aspects

The verification of durability and serviceability is part of testing the essential characteristics and by additional tests on the product respectively on the components:

| Essential characteristic            | Performance  |
|-------------------------------------|--------------|
| Bond strength at state of delivery  | See Annex A1 |
| Bond strength after heat aging      | See Annex A1 |
| Volatile compounds (Lost of weight) | See Annex A1 |

The verification of durability and serviceability is only ensured if the specifications of intended use according to Annex B and the specifications of the technical file of the manufacturer are kept.

## 4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

### 4.1 System of assessment and verification of constancy of performance

According to UKAD No. 320002-00-0605 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011 as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 3 applies.

## 5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

### 5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- UKTA number.

On behalf of the British Board of Agrément



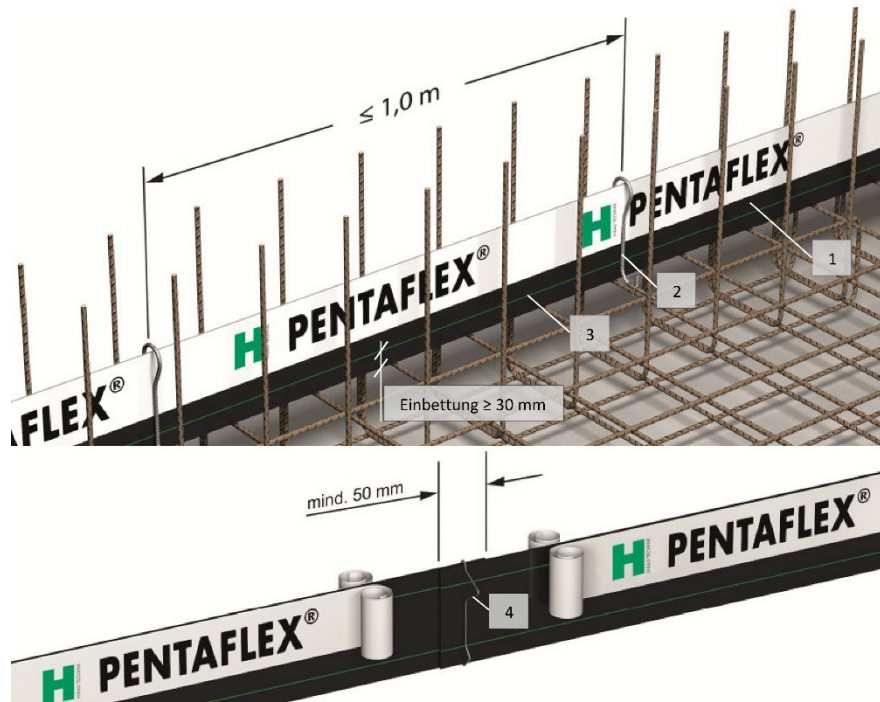
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**ANNEX A1**  
**System built-up, use categories and performances of the product**



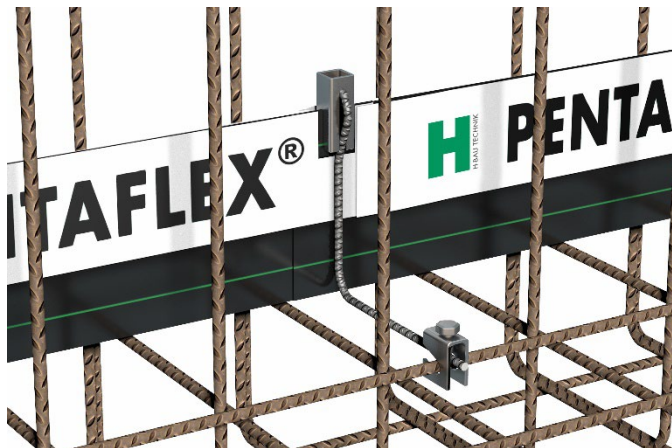
1. Coated metal water stop "PENTAFLEX KB" protection foil partially removed – for horizontal and vertical joints construction joints
2. Holder
3. Safety Line
4. Joint clip

Performance of the product:

|   |                          |
|---|--------------------------|
| Reaction to fire acc. to EN 13501-1             | Class E                  |
| Use category related to BWR 3                   | S/W 2                    |
| Content and/or releases of dangerous substances | See section 3.3          |
| Watertightness in end use conditions            |                          |
| h = 167 mm, t = 0.6 mm                          | Up to 20 m               |
| h = 80 mm, t = 0.6 mm                           | Up to 10 m               |
| Bond strength at the state of delivery          | > 0.8 N.mm <sup>-2</sup> |
| Bond strength after heat aging                  | Pass (< 20%)             |
| Volatile compounds                              | Pass (< 3%)              |

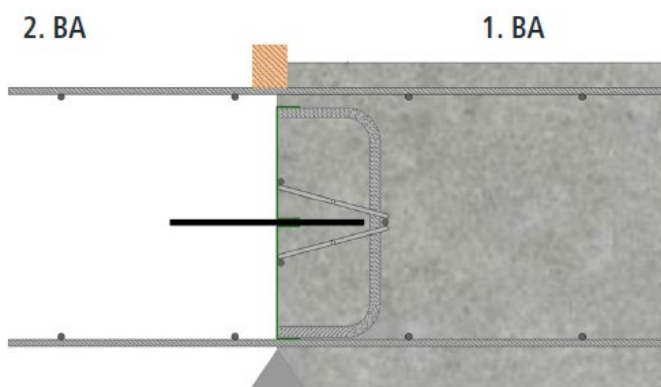
**ANNEX A2**  
**Description of equipment**

PENTAFLEX KB Plus – in addition with electrical grounding

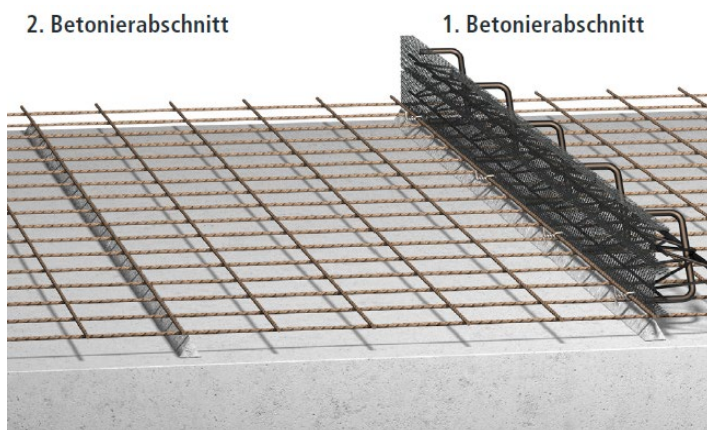


PENTAFLEX ABS – with stop end panel

2. Concreting step 1. Concreting step

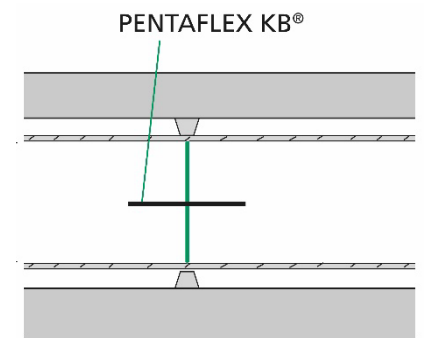


2. Concreting step 1. Concreting step

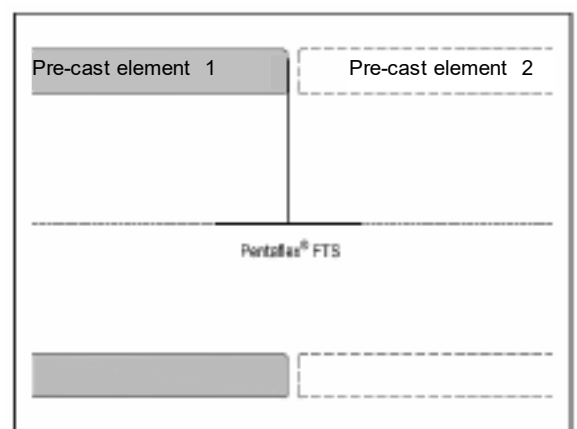
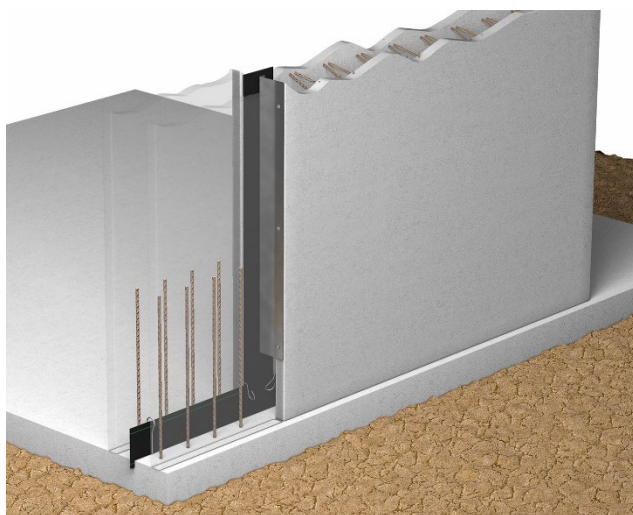


**ANNEX A3**  
**Description of equipment**

PENTAFLEX OBS - for controlled crack joints in concrete



PENTAFLEX FTS – for controlled crack joints in pre-cast elements



## **ANNEX B**

### **Intended Use / Specifications**

#### **Installation**

The levels of use categories and the performance of the waterproofing product can be assumed only, if the installation is carried out according to the installation instructions stated in the technical file of the manufacturer, in particular taking account of the following points:

- Installation by appropriately trained personnel
- Installation of only those components which are specified as components of the products
- Installation with the required tools
- Inspecting the substrate surface and the joint surface for cleanliness and correct treatment
- During storage and installation the water stop must be protected from excessive warming.
- The water stop is generally located in the centre of the construction joints respectively crack control sections.
- The embedment in the concreting steps must be at least 30 mm. The safety line (PENTAFLEX KB, PENTAFLEX KB Plus) is used to control the minimum installation depth during installation and concreting.
- The distance between water stop and the edge of the construction element must be at least 50 mm respectively at least three times of maximum grain size.
- The water stop has to be attached with variable retaining clips on or at the reinforcement. During concreting the water stop should not move and should not float.
- The overlapping between the water stops is at least 50 mm. After removing the protective foil, the water stops are pressed tightly together. Finally, overlapping has to be secured with the joint clips.
- The protective foil should be removed just before concreting, as the coating has to be protected from pollution. The second part of the protection foil has to be removed earliest after the concreting of the first concreting step.
- Inspecting of position and fixing of the water stop during installation and of the finished installed water stop respectively after the 1. concrete step and documentation of the results.





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