

General building authority test certificate

- TRANSLATION -

Test certificate number: P-MPA-BS-240027

Subject: "AquaproofX 1 PLUS"

Metal waterstop for use as a sealing for construction joints and controlled crack cross-sections in concrete components with a high resistance to water penetration in accordance with Administrative Provisions – Technical Building Rules sequential no. C 3.30

Applicant: an.kox GmbH
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Date of first issue: 11/07/2024

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Valid until: 10/07/2029

This general building authority test certificate replaces the general building authority test certificate P-MPA-BS-240027 dated 11/07/2024.

This general building authority test certificate consists of 7 pages.

Translation not checked by the inspection body. The original German version is authoritative. This translation may not be used in the German building inspection procedure.

A General provisions

- (1) This general building authority test certificate demonstrates the usability of the construction product as defined by the German State Building Codes.
- (2) The general building authority test certificate does not replace the permits, approvals and certificates required by law for the execution of construction projects.
- (3) The general building authority test certificate is granted without prejudice to the rights of third parties, including, but not limited to, private intellectual property rights.
- (4) Without prejudice to any further regulations under the "Special provisions" section, manufacturers and distributors of the construction product must provide the user of the construction product with copies of the general building authority test certificate and point out that the general building authority test certificate must be available at the application site. On request, copies of the general building authority test certificate shall be made available to the authorities concerned.
- (5) The general building authority test certificate may only be reproduced in full. Publication of excerpts requires the consent of the Braunschweig Civil Engineering Materials Testing Institute (MPA Braunschweig). Texts and drawings of advertising material must not contradict the general building authority test certificate. Translations of the general building authority test certificate must bear the following notice: "This translation of the German original document has not been checked by the MPA Braunschweig".
- (6) The general building authority test certificate may be revoked at any time. The provisions may be supplemented or amended subsequently, especially if this is required due to new technical knowledge.

B Special provisions

1 Subject and field of application

1.1 Subject

This general building authority test certificate applies to the production and application of the metal waterstop "AquaproofX 1 PLUS" joint sealing of an.kox GmbH.

The "AquaproofX 1 PLUS" is a galvanised steel sheet with a polymer coating on one side. The metal waterstop measures 140 mm x 1.2 mm (height x thickness) and is supplied without a protective film. The metal waterstop includes the "metal waterstop fastening bracket" and the "AquaproofX 1 PLUS butt straps".

1.2 Field of application

The metal waterstop may be used as an internal waterproofing for construction joints, controlled crack joints in precast walls and controlled crack cross-sections in cast-in-place concrete constructions with a high resistance to water penetration, with a maximum opening width of 1.0 mm in accordance with the Administrative Provisions – Technical Building Rules, sequential no. C 3.30 for the following areas:

- Pressing water up to a maximum water pressure of 2.0 bar
- Ground moisture and non-pressing water

The metal waterstop is suitable for water exchange areas. The sealing fulfils the requirements of use class A for wear class 1 and 2 in accordance with the German directive for water impermeable concrete structures (WU-Richtlinie)¹.

The metal waterstop shall always be installed in accordance with the specifications detailed in Section 4 (Implementation).

2 Provisions for the construction product

2.1 Composition, characteristics and properties

The construction product has the characteristics listed in Table 1 and shall correspond to same. The verification of the suitability for use of the metal waterstop was verified through in-house tests at the Braunschweig Civil Engineering Materials Testing Institute. The usability of the products was verified in accordance with the testing principles for the granting of general building authority test certificates for "Joint sealings in concrete components with a high resistance to water penetration in areas in contact with soil, PG-FBB, Part 1 (May 2020). The results are documented in test report no. 1204/340/23 from the Braunschweig Materials Testing Institute.

The construction joints which are sealed using the metal waterstop are sufficient for the fields of application listed under Section 1.2

- stable
- adhesive

¹ Directive by the German Committee for Reinforced Concrete "Water-impermeable concrete structures" Issue December 2017

- water-impermeable
- resistant to ageing

The construction product meets the requirements of construction material class *E* in accordance with DIN EN 13501-1.

2.2 Manufacture, packaging, transport, storage and marking

2.2.1 Manufacture

The construction product "AquaproofX 1 PLUS " is factory-produced.

2.2.2 Packaging, transport and storage

Packaging, transport and storage must be carried out in accordance with the manufacturer's instructions.

2.2.3 Product marking

2.2.3.1 National conformity mark (Ü-Zeichen)

The construction product must be marked with the national conformity mark (Ü-Zeichen) by the manufacturer in accordance with the Conformity Marking Ordinance of the federal states. The mark may only be applied if the requirements in accordance with Section 3 are fulfilled.

The national conformity mark (Ü-Zeichen) with the prescribed information:

- Name of manufacturer
- Number of the general building code test certificate

is to be applied to the packaging or the packing slip.

2.2.3.2 Additional information

The following information must also be included on the packaging of the construction product or the packing slip:

- Product name
- Batch number
- Intended use
- Reference to the associated processing regulations

3 Attestation of conformity

3.1 General information

Conformity of the designated metal waterstop "AquaproofX 1 PLUS" with the provisions of this general building authority test certificate shall be confirmed for every manufacturing plant with a declaration of conformity by the manufacturer on the basis of a factory production control and an initial test of the product through a recognised testing centre (ÜHP).

3.2 Initial test of the construction product by a recognised testing centre

The initial test of the product can be omitted, as the samples for the tests were taken from current production of the manufacturing plant as part of the usability certification.

If there are changes to the production conditions, a new initial test must be carried out.

3.3 Factory production control

A factory production control system shall be set up and implemented in the manufacturing plant in accordance with DIN 18200.

The factory production control shall be carried out in accordance with the provisions of the specifications listed in Table 1, adapted to the products and to their production conditions. The specified requirements are based on the results of the basic test.

The results from the factory production control are recorded and evaluated by the manufacturer. The records shall at least include the following information:

- Product designation
- Type of monitoring
- Date of manufacture and test
- Result of monitoring and comparison with requirements
- Signature of the person responsible for factory production control

The records shall be kept for at least five years and shall be submitted on request.

If the monitoring results are unsatisfactory, the manufacturer shall immediately take the necessary measures to remedy the defect. Construction products which do not meet the requirements shall be handled in such a manner that they cannot be mixed up with compliant products which are free from defects. After the defect has been remedied, the respective test shall be repeated, if this is required to verify that the defect has been eliminated.

Table 1: Type and frequency of the test to be carried out as part of the factory production control

Properties	Test conditions	Requirements	Frequency
Check of source materials	Manufacturer's declarations or suitable tests	no indication of changes	per batch supplied
Sheet metal thickness Coating thickness Height	-	0.50 mm \pm 10% 0.70 mm \pm 10% 140 mm \pm 10%	per batch or every 1,000 m
Weight per unit area	-	105 g/m \pm 10%	per batch or every 1,000 m
Density (coating)	MPA test report no. 1202/012/19	1.06 g/cm ³ \pm 5%	per batch
Adhesion properties	Section 5.4.1.1 of the test principles	\geq 0.5 N/mm ²	per batch or every 1,000 m

The records shall be kept for at least five years and shall be submitted on request.

If the monitoring results are unsatisfactory, the manufacturer shall immediately take the necessary measures to remedy the defect. Construction products which do not meet the requirements shall be handled in such a manner that they cannot be mixed up with compliant products which are free from defects. After the defect has been remedied, the respective check shall be repeated immediately, insofar as technically feasible and verification that the defect has been eliminated is required.

4 Implementation

As a rule, the metal water stop must be installed in the center of the construction joints, with the coated side facing the water. The metal water stop must be at least 3 cm into the concrete. A minimum distance of 5 cm or at least three times the thickness of the maximum particle size to the edge of the component shall be observed.

Fastening to the reinforcement is carried out using the "metal water stop fastening bracket". It must be checked that no shifting or floating is possible during the concrete layers. The joint areas were butt-jointed and secured from behind with the AquaproofX® 1 PLUS butt straps that can be glued on one side.

The DBV data sheet "Coated metal waterstop systems", version March 2023, also applies to the execution and installation work.

5 Processing

The manufacturer's processing instructions must be adhered to during the processing of the construction product.

The manufacturer is obligated to consistently incorporate the implementation provisions in their processing instructions.

This general building authority test certificate and the manufacturer's processing instructions shall be available at the place of installation.

6 Legal basis

This general building authority test certificate is granted on the basis of Article 19 of the Lower Saxony Building Code (NBauO) in conjunction with the Administrative Provisions – Technical Building Rules, sequential no. C 3.30.

7 Legal remedies

An objection can be raised against this general building authority test certificate within one month of issue. The objection must be filed in writing or for the record with the management of the Civil Engineering Materials Testing Institute, Beethovenstraße 52, 38106 Braunschweig, Germany. The date of receipt of the notice of objection at the testing centre shall be decisive when determining whether the objection has been made in due time.

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