

General Building Authority Test Certificate

Cresco[®] BT

Bentonite-based expanding waterstop for sealing construction and butt joints in concrete and other impermeable structures with high resistance of the penetration of water

P-51-07-0150 | 24.04.2023

issued by: TU München, MPA BAU



Technical University of Munich

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General Building Authority Test Certificate

Accredited Test Centre: MPA BAU TU Munich (BAY01)

No.: P-51-07-0150

Bitumen and Sealing Materials
Group

Date
24.04.2023

Our Ref.
AF/FI

Subject:

Bentonite-based expanding waterstop
designated "Cresco BT Swelling Tape" for the
sealing of construction and butt joints in concrete
and other impermeable structures with high
resistance to the penetration of water in areas in
contact with the ground according to MVV TB,
Part C3, No. C 3.30

Applicant: See above

Date of issue: 01.05.2008

Renewed until: 01.05.2028

This General Building Authority
Test Certificate comprises 7
pages

A General provisions

- (1) This General Building Authority Test Certificate verifies that the construction product is usable in compliance with the State building regulations.
- (2) The General Building Authority Test Certificate does not replace the approvals, consents and certifications prescribed by law for the realisation of construction projects.
- (3) The General Building Authority Test Certificate is issued without prejudice to the rights of third parties, in particular private property rights.
- (4) Notwithstanding further regulations in the Special Provisions, producers and distributors of the construction product have to provide its users with copies of the General Building Authority Test Certificate and inform them that the certificate must be available at the site location. Upon request, copies of the certificate shall be supplied to the authorities involved.
- (5) The General Building Authority Test Certificate may only be reproduced in full. Publication of extracts requires the consent of the Centre for Materials Testing, Building Materials Division, of Munich Technical University. Advertising material texts and drawings must not be contradictory to the General Building Authority Test Certificate. Translations of the certificate must contain the notice "Translation of the original German version not checked by the Centre for Materials Testing, Building Materials Division, of Munich Technical University".
- (6) This General Building Authority Test Certificate is issued subject to revocation. The provisions of the certificate may be supplemented or amended at a later date, particularly if new technical knowledge so requires

B Special provisions

1. Subject and scope of application

1.1 Subject

This General Building Authority Test Certificate is applicable to the manufacture and use of the bentonite-based expanding waterstop with the product designation "Cresco BT Swelling Tape" from Max Frank GmbH & Co. KG, Leiblfling, as a sealant for joints in concrete and other impermeable structures with high resistance to the penetration of water in areas in contact with the ground which cannot be classified as the C 2.10.2 and C 2.10.3 products in chapter C 2, in accordance with the Model Administrative Rules on Technical Building Regulations (MVV TB), 2021/1 edition, Part C3, No. C 3.30.

1.2 Scope of application

The expanding waterstop "Cresco BT Swelling Tape" may be used for the sealing of construction and butt joints in concrete structures with high resistance to water penetration and a maximum aperture width of 0.25 mm against:

- Ground water and percolating water not under hydrostatic pressure,
- Periodically accumulating seepage water and water under hydrostatic pressure up to a maximum of 2.0 bar (20 m immersion depth)

The expanding waterstop “Cresco BT Swelling Tape” is also suitable for areas with fluctuating water levels.

The sealant meets the requirements of service class A for Exposure Classes 1 and 2 under the WU-Richtlinie¹.

2. Provisions for the construction product

2.1 Composition, characteristics and properties

2.1.1 Composition

The expanding waterstop “Cresco BT Swelling Tape” is made of sodium bentonite and butyl rubber. Accessories offered by the manufacturer are the “Cresco Construction Adhesive” and a fixing grid with nails.

2.1.2 Characteristics

- | | |
|--------------------|---|
| – Width | 20 and 25 mm |
| – Thickness | 15 and 20 mm |
| – Density | 1.468 g/cm ³ |
| – Thermogravimetry | Stages of weight loss:
27-172 °C: 2.52 %
172-300 °C: 5.41 %
300-602 °C: 38.88 %
602-1048 °C: 3.24 % |

The expanding waterstop “Cresco BT Swelling Tape” also has the characteristics listed in table 6 of test report 51-07-0150 dated 28.04.2008 (tests on the functionally significant product properties).

2.1.3 Properties

Use of the expanding waterstop “Cresco BT Swelling Tape” for sealing of construction and butt joints was verified - in compliance with PG FBB, Part 1 (Testing Principles for the award of General Building Authority Test Certificates for joint sealants in concrete structures with high resistance to the penetration of water, against water which is either under limited, or

¹DAfStb – Water Impermeable Concrete Structures guideline (WU-Richtlinie)

not under hydrostatic pressure, and ground water, Part 1: Seals for construction joints and controlled crack joints), July 2007 edition - by test reports 51-07-0150 of 28.04.2008 and 51-09-0006 of 17.08.2009 from TU Munich MPA BAU and is certified by this General Building Authority Test Certificate. The July 2007 PG FBBs, Part 1, applied are essentially the same as those of May 2020.

The installed product meets the requirements for building materials in material class B2 under DIN 4102-1 (normally flammable). This was verified by test certificate B23031 of 09.02.2023 by Holzforschung München (Munich Timber Research - HFM).

2.2 Manufacture, packaging, transport, storage and labelling

2.2.1 Manufacture

The bentonite-based expanding waterstop “Cresco BT Swelling Tape” is factory produced.

2.2.2 Packaging, transport, storage

The information on the packs about requirements from other legal areas (e.g. hazardous substances and transport legislation) must be followed.

2.2.3 Labelling of product and components

2.2.3.1 Mark of Conformity (Ü-Zeichen)

The construction product shall be labelled by the manufacturer with the Mark of Conformity (Ü-Zeichen) under the Mark of Conformity regulations of the States. It may only be so labelled if the conditions of Section 3, Certificate of Conformity, are met.

The Mark of Conformity shall be inserted on the packaging or, if not possible, on the delivery or despatch note, together with the specified information:

- Manufacturer's name
- General Building Authority Test Certificate number and testing centre designation

2.2.3.2 Additional information

The following information shall appear on the product packaging or despatch note:

- Product name
- Batch number
- Use
- Reference to the relevant application regulations
- Resistance to fire class B2 under DIN 4102-1 (normally flammable)

Components packed separately shall be clearly marked as belonging to the product.

3 Proof of Conformity

3.1 General

The conformity of the construction product with the requirements of this General Building Authority Test Certificate is certified by a Declaration of Conformity by the manufacturer on the basis of in-house production control (WPK) and an initial test on the product before certification of conformity (initial test - EP) by a building authority approved test centre (ÜHP).

3.2 Initial testing of construction product by an approved test centre

The manufacturer shall appoint a duly approved test centre to conduct the initial testing. It shall include the tests on the characteristics listed in section 2.1.2. The test values shall not deviate from the reference values by more than the specified tolerances.

Initial testing of the product may be omitted because the samples for testing are taken from the current production at the manufacturing facility in connection with the certification of usability.

If the production conditions change, initial testing shall be repeated.

3.3 In-house production control

An in-house production control system shall be set up and implemented at the manufacturing facility. In-house production control means the continuous monitoring of production undertaken by the manufacturer to ensure that the construction product manufactured complies with the provisions of the General Building Authority Test Certificate.

The in-house production control is defined on the basis of DIN 18200 and the test principles Joint Sealants, PG FBB, Part 1, May 2020 edition:

- Control of the raw materials by means of manufacturer's declarations or appropriate tests (on each delivery batch)
- Unlimited expansion in mains water, max. deviation 10 % from reference value, per batch $\pm 15\%$
- Density, per batch $\pm 15\%$

The results of the in-house production control shall be recorded and analysed. The records must contain the following minimum information:

- Designation of construction product
- Type of control
- Date of manufacture and inspection of the construction product

- Result of the controls and, if applicable, comparison with the requirements
- Signature of the person responsible for the in-house production control

The in-house production control records shall be retained for a minimum of five years. Upon request, they shall be submitted to the test centre in the event of changes to or renewals of the General Building Authority Test Certificate, and to the highest building supervision authority.

If the inspection result is unsatisfactory, the manufacturer shall take the necessary action without delay to correct the deficiency and reject the products affected. The in-house production control system shall ensure that products that do not meet the requirements are not labelled with the Mark of Conformity and that confusion with compliant products is impossible. The relevant inspection shall be repeated without delay after correction of the deficiency – if technically possible and necessary for proof of remediation.

3.4 Certification of conformity

The conformity of the construction product with the provisions of this General Building Authority Test Certificate shall be verified for each production facility by a Declaration of Conformity by the manufacturer, based on the initial testing and in-house production control defined in 3.2 and 3.3.

The manufacturer shall issue the Declaration of Conformity by labelling the product with the Mark of Conformity (Ü-Zeichen) as stated in 2.2.3.1.

4 Application

The manufacturer's application instructions apply to installation of the joint sealant. The application instructions and this General Building Authority Test Certificate for the joint sealant must be available at the point of installation.

The bentonite-based expanding waterstop "Cresco BT Swelling Tape" should be applied as late as possible before concreting and if possible centrally in the construction or butt joints. Minimum concrete cover of 8 cm should be maintained.

5 Bonding

The manufacturer's bonding instructions apply to the joint sealant. The bonding instructions and this General Building Authority Test Certificate for the joint sealant must be available at the point of installation.

Only the accessories supplied by the manufacturer with the bentonite-based expanding waterstop "Cresco BT Swelling Tape" may be used.

The expanding waterstop should be bonded to the concrete surface using the “Cresco Assembly Adhesive“, or be fixed to the substrate with nails spaced approximately 30 cm apart, together with a grid. The substrate must be clean and free from grease, and gaps below the swelling tape should always be prevented. The swelling tape must not be exposed to water for a lengthy period and swollen joint tapes must be replaced before concreting. The ends are lapped by about 10 cm.

6 Provisions for use, maintenance and servicing

(N/A)

7 Legal basis

This General Building Authority Test Certificate is renewed under Article 19 of the State of Bavaria Building Regulations in conjunction with MVV TB No. C 3.30.

8 Legal remedies

Legal action may be taken against this decision within one month of its notification at Straubing Register Court, KG: HRA 1341 / GmbH: HRB 9032 in writing or for recording by the clerk of the court at the court office. The action must name the complainant, the respondent (Free State of Bavaria) and the subject of the claim and should contain a specific application. The facts and evidence justifying the action should be stated and the original or a copy of the contested decision should be attached. Copies of the action and all the written submissions should be enclosed for the other parties.


Information on legal remedies:

- The appeal proceedings in building regulation matters were abolished in Bavaria by the law amending the Code of Administrative Procedure of 22 June 2007 (Gaz. p. 390). There is no facility to appeal against this decision.
- Filing of an action electronically (e.g. by email) is not permitted.
- Under federal law, since 1 July 2004 an advance on fees has been payable in litigation proceedings at administrative courts.

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