General Building Test Certificate

Intec® Premium

P-51010a/05 | 01.02.2016 | english

Tested by: MPA Bau, München
General Building Test Certificate

Officially approved testing laboratory  MPA BAU TU München (BAY01)

Object and field of use  Injection hose system comprising „Intec Premium-Verpressschlauch“ and „Intectin Plus Injektionsharz“. Joint seal (construction and butt joints) of normal combustibility for structural elements made of concrete with high resistance to penetrating water, with and without hydrostatic pressure or ground moisture according to Construction Regulation List (Bauregelliste) A Part 2 Serial No. 1.4

Applicant  MAX FRANK GmbH & Co. KG, Leiblfing

Date of issue  01.02.2006

Valid until  01.02.2021

By virtue of this general building test certificate, the above object may be used in terms of the Bavarian state building regulations.

This general building test certificate comprises:

7 pages
2 appendices
1 Subject and Field of Application

1.1 Subject

This general building test certificate is valid for the production and use of the injection hose system designated „Intec Premium“ of MAX FRANK GmbH & Co. KG, Germany which can be used a number of times for sealing joints (construction and butt joints) of concrete structural components made of concrete with high resistance to penetrating water, with and without hydrostatic pressure, or ground moisture according to the Construction Regulation List (Bauregelliste) A Part 2 Serial No. 1.4.

1.2 Field of Application

The injection hose system “Intec Premium” may be used for sealing construction and butt joints with a maximum opening width of 0.25 mm in structural elements made of concrete with a high resistance to penetrating water exposed to the following:

- Ground moisture and water without hydrostatic pressure
- Seepage water which temporarily accumulates and water with hydraulic pressures up to 0.2 MPa (20 m water head)

The seal fulfils the requirements of service class A for exposure classes 1 and 2 in the WU-Guideline.

2 Specifications for the Construction Product

2.1 Composition, Properties and Characteristics

2.1.1 Composition

The construction product consists of the following products.

- Injection hose “Intec Premium-Verpressschlauch” with accessories (nail packers, Intec hose clamps, Intec hose ends, ball-nipples etc., see manufacturer’s information).
- Injection material “Intectin Plus Injektionsharz” comprising components A and B.

2.1.1.1 Properties

Proof is furnished for the use of the construction product for sealing construction and butt joints in structural elements made of concrete highly resistant to water penetration by the test report No. Ta 51010/05 dated 27.01.2006 according to the testing principles for joint seals version January 2005. The proof is certified by this general building test certificate.

DAfStb - Guideline, Water Impermeable Concrete Structures (WU-Guideline) - Version November 2003
715PZ06/03-INT/GB-02/16
At present the working team of the testing laboratories on the award of general building test
certificates according to the Construction Regulation List (Bauregelliste) A Part 2, Serial No.
1.4 assumes that, after installation and injecting, injection hose systems may be classified as
possessing normal combustibility.

The injection material “Intectin Plus Injektionsharz” is CE marked according to
DIN EN 1504-5 (declaration of performance No. IPUP01 dated 01.07.2013).

2.1.1.2 Characteristic Values
The product and product components of the injection hose system “Intec Premium” possess
the characteristic values in Tables 7 and 8 of the test report No. Ta 51010/05 dated
27.01.2006 (identification tests and tests of the function of the main product properties).

2.1.1.3 Manufacture, Packaging, Transport, Storage and Marking

2.1.1.4 Manufacture
The construction products “Intec Premium -Verpressschlauch” and “Intectin Plus Injektions-
harz” are factory-produced”.

2.1.1.5 Packaging, Transport and Storage
The components of “IntectinPlus Injektionsharz” must be stored above 0°C. Further specifications
are in the instructions for installation and processing provided by the manufacturer.

The details displayed on the packaging regarding the requirements of other legal areas (e.g.
dangerous materials or transport law) are to be observed.

2.1.2 Marking
The individual components of the injection hose system “Intec Premium” are to be marked as
follows.
- Name of construction product
- Conformity proof according to ÜZVO (see Section 4)
- Name of manufacturer
- Date of manufacture or charge number, if necessary expiry date
- Safety instructions and warnings

2.2 Application
The manufacturer’s instructions for joint sealing apply (Appendix 1). The instructions for use
and the general building test certificate for joint sealing must both be available at the location
of application.
The injection hose “Intec-Verpressschlauch” should be placed, as far as this is possible, in the centre of the construction element. In the case of thicker construction elements \( (d > 60 \text{ cm}) \), the hose should be installed about 25 cm from the surface in contact with water. Ensure full surface contact on the surface of the construction element at the construction joint.

If possible, a triangular fillet should be pressed into the fresh concrete to guarantee full surface contact. The concrete cover should always be at least 5 cm. The installation sections should not be longer than 10 m. Successive circular injection regions must overlap. If possible, the position of the injection regions should be included in the construction plan.

The following requirements are placed on the substrate at the application points.

- Concrete with a high resistance to water penetration
- The surface should be as flat as possible.

A connecting mix \( (0/8 \text{ mm aggregate}) \) should be used in the region of construction joints.

The following requirements must be fulfilled before the first injection is performed.

- The heat of hydration must have dissipated.
- Settling and shrinkage of the structure should have subsided to a large extent.
- Based on experience, injecting should not start in the first four weeks following concreting

Injection should always be performed as late as possible.

### 2.3 Processing

The manufacturer’s instructions apply for sealing (Appendix 1). The instructions for use and the general building test certificate must both be available at the location of application.

Only accessories delivered by the manufacturer with the injection hose system “Intec Premium” are to be used.

The injection hose is to be placed firmly in the construction joint, secured against displacement and floating. The fastenings for the injection hose should not be more than 15 cm apart. The hose is fastened using the fasteners recommended by the manufacturer. The injection hose must not touch the later concrete surface or a recess etc. at any point. At positions where injection circles cross, the hose should be sealed with filament tape to prevent interaction of the injections.

The injection resin “Intectin Plus Injektionsharz” must be mixed according to the manufacturer’s instructions and stirred well. Water and other materials must not be stirred into the material. The injection may be placed using an electric single component injection pump or, in the case of small quantities, a manual press. For all systems, the injection pressure must be controlled constantly.
The “Intectin Plus Injektionsharz” is pressed into the “Intec Premium-Verpressschlauch” at moderate, constant pressure. A low continuous pressure is better than a short high pressure. The injection pressure should be increased up to 8 MPa in a controlled manner. It is recommended to repeat the injection once or twice during the processing period of the resin.

If large amounts of water emerge from a construction joint which has not yet been injected, the flow rate of the water should be taken into consideration. Appropriate measures should be taken if the “Intectin Plus Injektionsharz” does not have sufficient time to cure without being washed out, e.g. drainage.

In the case of repeated use of the “Intec Premium-Verpressschlauches”, the hose should be emptied by pressure flushing after each injection. The “Intectin Plus Injektionsharz” can be ejected by compressed air at a maximum pressure of 2 bars and then the hose flushed with the special cleaner “Intectin-Spezialreiniger” provided by the manufacturer and purged using compressed air or, alternatively, immediately flushed at 2 bars with “Intectin-Spezialreiniger” and purged using compressed air. The resistance-free ball-nipples necessary for pressure flushing (not ball-nipples with high opening pressure) may be obtained from the manufacturer. A suitable pressure gauge should be used to ensure that the maximum emptying pressure of 2 bars is not exceeded.

The “Intectin Plus Injektionsharz” may be processed at structural element temperatures between 8°C and 40°C. The corresponding processing periods are to be taken into account.

According to experience, 1 kg resin “Intectin Plus Injektionsharz” is needed for 10 m hose “Intec-Verpressschlauch”.

The injection process should be logged.

2.4 Regulations for Use, Maintenance and Servicing

The nail packers should be accessible for the subsequent injection work (multiple injection) and the surfaces concreted flush. The interior structure is to be taken into account.

3 Proof of Compliance

3.1 General

The confirmation of the compliance of the construction product with the requirements of this general building test certificate is effected by the proof of compliance based on this general building test certificate.

3.2 First Test

Not applicable
3.3 Factor Production Control

Self-control of production quality is to be performed in the production plant of MAX FRANK GmbH & Co. KG, Mitterweg 1, 94339 Leiblfing, Germany.

The self-control shall be performed according to DIN 18200:2000-05 and the principles for testing joint seals developed by the working team of the testing laboratories on the award of general building test certificates according to the construction regulations list A, Part 2, Chapter 1, Ser. No. 1.4, version May 2005.

- Control of initial materials based on declarations by the manufacturer or by suitable tests (for each charge delivered)
- Injection hose: construction and dimensions (for each 1000 m), impermeability to fresh cement paste (for each 5000 m)
- Injection resin: according to DIN EN 1504-5 (for each charge or delivery)

The results of the self-control of production quality are to be recorded, evaluated and kept for at least five years.

4 Compliance Marking

Every construction product must be marked by the manufacturer (Ü mark) according to the German state compliance regulations for compliance marks. The Ü mark shall be placed with the prescribed information (Appendix 2) on the construction product or its package (an accompanying leaflet may also be used for this purpose) or, if not possible, on the delivery note.

5 Legal Basis

This general building test certificate is issued on the basis of Article 17 of the Bavarian Construction Regulations BayBO in relation to the construction regulations list A, Part 2, Chapter 1, Ser. No. 1.4 of the correspondingly valid version.

6 Legal Instruction

Objection may be raised against this general building test certificate within one month of its announcement. The objection must be filed in written form or as a protocol at the Materialprüfungsamt für das Bauwesen, Abteilung Baustoffe, Munich, Germany.
7 General Remarks

(1) This general building test certificate is proof of the usability of the construction product considered herein with regard to German state construction regulations.

(2) This general building test certificate does not replace mandatory permits, allowances and certifications governing the execution of construction projects.

(3) This general building test certificate is issued without explicit reference to the rights of third parties, especially private patents and other rights.

(4) The manufacturer or the distributor of the construction product has, irrespective of other regulations, to make copies of the general building test certificate available for the user of the construction product and inform the user that the general building test certificate must be available at the location where the product is being used.

(5) The instructions for use supplied by the manufacturer have been tested by the testing laboratory with regard to their plausibility.

(6) This general building test certificate may only be reproduced in complete and unabridged form. The publication of excerpts thereof requires the consent of the Materialprüfungsamt für das Bauwesen, Abteilung Baustoffe of the Technische Universität München.

The text and diagrams of advertising material must not contradict the general building test certificate. This translation of the original German version has not been approved by the Materialprüfungsamt für das Bauwesen, Abteilung Baustoffe – „von dem Materialprüfungsamt für das Bauwesen, Abteilung Baustoffe der Technischen Universität München nicht geprüfte Übersetzung der deutschen Originalfassung“.

(7) The general building test certificate can be revoked after issue. The requirements can be amended or changed after issue, especially if new technical expertise requires this.
Intec® Injektionsschlauch
Intec® injection hose system

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This Installation Guideline is a condensed description of factors having a direct effect on the performance of the FRANK product and is based on the present state of the art. It may be necessary to alter these recommendations, as more information becomes available. Correct use is the responsibility of the user. If in doubt please consult your local supplier.