

# Test report

**Zemseal<sup>®</sup>**

**sub-structure waterproofing system**

**Plastic pipe penetration through**

**Zemseal<sup>®</sup> sub-structure waterproofing membrane**

17.06.2021

tested by: MAX FRANK testing laboratory, Leiblfling

## Test Report

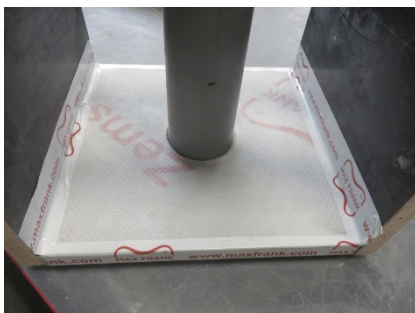
### Plastic pipe penetration through Zemseal® sub-structure waterproofing membrane

#### 1. Test object

Leakage testing of a plastic pipe penetration through Zemseal® sub-structure waterproofing membrane using "Frankosil 1K Plus" liquid plastic sealant.

#### Test Setup

- a) A  $\varnothing$  80 mm opening is cut in the centre of a Zemseal® section and a plastic pipe with an outer  $\varnothing$  of 75 mm is inserted.



- b) The plastic pipe is pre-treated on the outside circumferential with "Frankolan FPO-Primer".



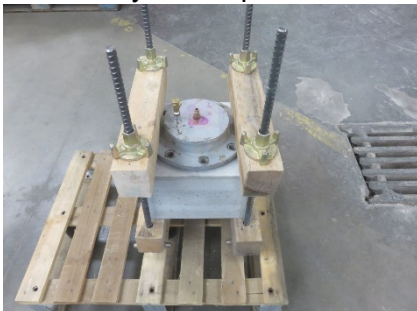
- c) Sealing of the transition between the Zemseal® sub-structure waterproofing membrane and the plastic pipe with approx. 10 cm overlapping applied "Frankosil 1K Plus" in 2 work steps including fabric insertion.  
Total thickness of the applied layer: 3 – 3,5 mm



- d) After the liquid plastic has cured (24 hours), the formwork of the test specimen is closed and filled with a concrete ( grade C30/37).



- e) After 5 days, the specimen shall be stripped and a test bell is installed.



## 2. Examination

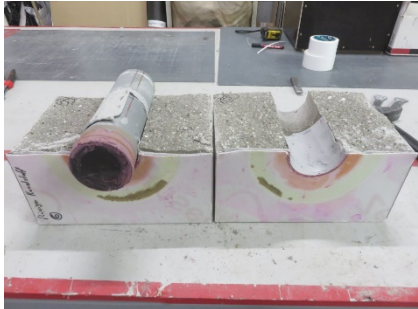
7 days after concreting, a pressure test was carried out with an initial and constant pressure of 5 bar for 72 hours.



## 3. Summary

The result of the pressure test show no penetration of moisture along the penetrating plastic pipe.

Safe waterproofing is ensured when the liquid plastic "Frankosil 1K Plus" and the corresponding primer are used correctly.



Leiblfing, 17.06.2021

Dept. of Sealing Technology/Testing Laboratory