

SCHOMBURG GmbH & Co. KG · Aquafinstraße 2-8 · D-32760 Detmold

Ihr Gesprächspartner Im Haus:

Niels Theis Head of Product Management

Im Außendienst:

Declaration of conformity
INDUFLOOR-IB1225 / ASODUR-GBM

Dear Sir or Madam,

With this declaration of conformity, SCHOMBURG GmbH & Co. KG offers assurance that the formulation is identical between the products

INDUFLOOR-IB1225 / ASODUR-GBM.

Their designated accreditation, test certificates and technical documentation can be interchanged.

Their product properties and application performance are identical.

Yours sincerely

SCHOMBURG GmbH & Co. KG

i.V. Dr. Werner Güth

Head of the technical chemical department

Head of Product Management

Datum: 31.10.2016 Unser Zeichen: NT / KD

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Test report

Testing order: Test of compatibility on wet concrete

according to DIN EN 13578

Customer: SCHOMBURG GmbH & Co. KG

Aquafinstraße 2 – 8 32760 Detmold Germany

Person in charge: J. Magner

S. Busch (B. Eng.)

Date of the test report: 2012-04-30

This test report comprises: 9 pages

The test results exclusively refer to the tested materials.

The publication of the test report in extracts, and references to tests for advertising purposes require our written agreement in each individual case.





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1 SUBJECT

Polymer Institut was charged by SCHOMBURG GmbH & Co. KG, Detmold (Germany), to test the bond behaviour of the primer

INDUFLOOR-IB 1225

under the influence of moisture at the reverse side.

The test was carried out in accordance with

DIN EN 13578

"Products and systems for the protection and repair of concrete structure - test method - compatibility on wet concrete"

2 RECEIPT OF SAMPLES

The samples were delivered on 2012-01-17 by post at the Polymer Institut.

table 1: receipt of samples

no.	material	component	charge	quantity [kg]
1	INDUFLOOR-IB 1225	A + B	0120016	1.0
2	INDUFLOOR-IB 1225	A+B	0120016	1.0
3	INDUFLOOR-IB 1225	A + B	0120016	1.0

The top sealing on epoxy-base was taken from the stock of the Polymer Institut.



3 PREPARATION AND STORAGE OF THE TEST SPECIMEN

3.1 Preconditioning

With the customer a minimum processing temperature (MAT) of 10°C has been agreed. The Preconditioning of the concrete substrate bodies and the coating material was carried out in detail by the flowchart according to the picture 2 of the DIN EN 13578.

3.2 Preparation of the mixtures of the components

The mixing ratio of the components for the coating material used is to be taken from table 2.

table 2: preparation of the mixtures of the components

material	mixing ratio in parts by mass		
material	component A	component B	
INDUFLOOR-IB 1225	2	1	

The materials were measured out in the above mixing ratio and mixed to homogeneity (for about 3 min).

3.3 Application

The application of the single coating materials has been carried out by an employee of the Polymer Institut. The <u>concrete substrate bodies MC (0.40)</u> according to EN 1766, which have been <u>wet-stored at 10°C</u> were taken out from the water bath, their surface has been wiped with absorptive tissues and the specimens were brought into a vertical position.

After a waiting time of 2.5 h, the priming coat has been applied onto the specimens. Between the application of the primer and the application of the subsequent layers, the specimens were stored in a water bath lying on a lath floor in order to keep the water level 10 mm under the coating section (see image 1).



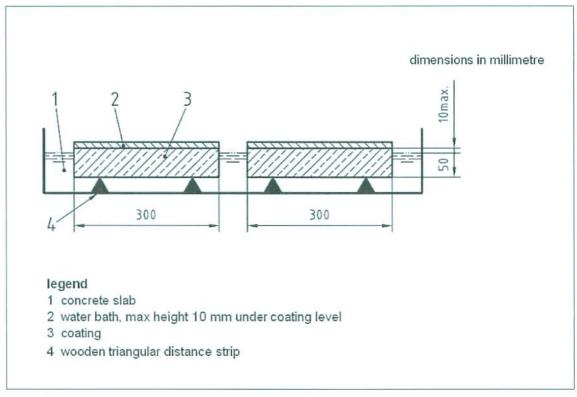


image 1: storage of the test specimens in water

3.4 Coating system of the composite specimen

The consumptions (mean values) are to be taken from the following table.

table 3: coating of the substrate specimens

	consumption in [g/m²] - mean value -			
layer sample-No.	prii INDUFLO	ner DR-IB 1225	top sealing top sealing on epoxy-base	
	1. working step	2. working step		
1, 2, 5, 6	226	225	approx. 2000	
application tool	roller		tooth comb	



3.5 Stress Procedure

After the application of the coating material the slabs were stressed as follows:

table 4: stress procedure

spec	specimen stress procedure			edure	
num- ber	sub- strate	hardening	storage	climate [°C / % r. F.]	time [d]
2	MC	laying in water*	in water*	(8 ± 1) /	56
2	(0.40)	on air		(75 ± 10)	56

^{*} As shown in image 1 the rear sides and the sides of the specimens are stored under water meanwhile the upper 10 mm including the coating is stored at standard atmosphere.

4 PULL-OFF STRENGTH AND BLISTERING

4.1 Pull-off strength

The bond behaviour of the coatings was determined in accordance with DIN EN 13578 two days after removal of the specimens from the water by testing the pull-off strength according to EN 1542 "Products and systems for the protection and repair of concrete structures - Test methods - Measurement of bond strength by pull-off".

Test cylinders of diameter 50 mm were glued on to the coating, using a solvent-free two-component epoxy resin adhesive. The pull-off tests were carried out using a calibrated tensile tester of the company Freundl, type Easy-M, with constant increase of load of 100 N/s.

The test results are to be taken from the following table.



table 5: pull-off strength after 56 days storage at 23°C - reference test specimen system with the primer INDUFLOOR-IB 1225

specimen	no.	pull-off strength	fracture surface [%]		
	no.	[N/mm ²]	В	AOS2	
	1	4.1	100	12	
	2	4.1	30	70	
5	3	4.0	60	40	
	4	4.0	100		
	5	3.7	50	50	
	1	3.8		-	
	2	4.0			
6	3	4.3	100		
	4	4.0			
	5	3.6			
nean value		4.0		1	
owest single v	alue	3.6			

table 6: pull-off strength after 56 days storage at (8 ± 1) °C and (75 ± 10) % r. h. system with the primer INDUFLOOR-IB 1225

specimen	no.	pull-off strength [N/mm²]	fracture surface [%]		
	110,		В	AOS1	AOS2
	1	2.1	10	90	-
	2	2.6	12	70	30
1	3	2.8	20	50	30
	4	2.0	-	70	30
	5	2.3	10	60	30
	1	2.3	10	50	40
	2	2.7	30	70	-
2	3	2.6	10	90	_
	4	2.2	10	70	20
	5	2.4	10	70	20
mean value		2.4			
lowest single va	alue	2.0			

legend:

B: cohesive fracture in concrete

AOS1: adhesive fracture between concrete and INDUFLOOR-IB 1270

AOS2: adhesive fracture between INDUFLOOR-IB 1270 and the top sealing on epoxy-base



4.2 Visual examination

During the whole period of stressing and immediately after finalization (after 56 days) the test specimen were examined visually in regards to eventually noticeable changes of characteristics of the coating compared to the dry-stored specimen.

Visible changes in the coating in terms of

blisters, cracks and exfoliation

are evaluated according to

- ISO 4628-2 (evaluation of the degree of blistering)
- ISO 4628-4 (evaluation of the degree of cracking) and
- ISO 4628-5 (evaluation of the degree of exfoliation)

with an evaluation scale from 0 - 5 for quantity and dimension of the alterations:

- 0 lowest value / no changes
- 5 heavy changes / high volume

Result

The test specimen stored in water at $(8 \pm 1)^{\circ}$ C and those stored under standard atmosphere condition did not show any changes on top of the coating, that means according to ISO 4628

- no blisters (0)
- no cracks (0)
- no exfoliation (0)



5 SUMMARY

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under the influence of moisture at the reverse side.

The test was carried out in accordance with DIN EN 13578 "Products and systems for the protection and repair of concrete structure - test method - compatibility on wet concrete".

The results are given in the previous chapters.

Flörsheim-Wicker, 2012-04-30

The head of the institute

I Magner

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The person in charge

S. Busch (B. Eng.)