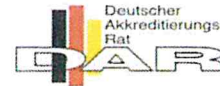


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Test report

P 7532-3

Testing order: **Testing of the floor coating system
INDUFLOOR-IB 3357
in accordance with DIN EN 13813**

Customer: **SCHOMBURG GmbH & Co. KG
Aquafinstraße 2-8
32760 Detmold**

Persons in charge: **J. Magner
T. Seitz**

Date of the test report: **2011-12-21**

This test report comprises: **7 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 GmbH has been charged by the company SCHOMBURG GmbH & Co. KG, Detmold, to carry out tests on concrete substrates, coated with

INDUFLOOR-IB 3357

in accordance with DIN EN 13813 „Screed material and floor screeds – Screed materials – Properties and requirements, German version EN 13813:2002“ (January 2003).

Extent of the tests

The following tests have been carried out:

Table 1: Survey of tests

Sub-clause of report	Test	Test method
3.1	Tensile bond strength	DIN EN 13892-8
3.2	Impact strength	DIN EN ISO 6272-1
3.3	Wear resistance	DIN EN 13892-4

In clause 4 a summary of the results and a corresponding classification in accordance with DIN EN 13813 is given.

2 RECEIPT OF SAMPLES

The following test specimens have been delivered on 2011-12-06 to Polymer Institut by forwarding agency:

Table 2: Receipt of samples

system*	systemconstruction*		consumption* [g/m ²]
INDUFLOOR-IB 3357	primer	INDUFLOOR-IB 1270	500
	sprinkling	silica sand 0,2 – 0,6 mm	1000
	topcoat	INDUFLOOR-IB 3357	1600
		filled with silica sand 0,2 – 0,6 mm	900

*: as specified by the customer

3 TESTS

The storage of the apparatus and specimens as well as the procedure of the tests has taken place at standard temperature in accordance with DIN EN 23270 in horizontal position. At the time of the testing the age of the specimens was at least 14 days.

3.1 Tensile bond strength

The tensile bond strength has been tested following DIN EN 13892-8 „*Methods of test for screed materials - Part 8: Determination of bond strength, German version EN 13892-8*” (February 2003), using the following test parameters:

- Test apparatus: Tensile bond strength apparatus Easy M10, model BPS Wennigsen GmbH
- Test speed: 100 N/s (0,05 N/mm² x s)
- Diameter of test cylinder: (50 ± 0,5) mm
- Adhesive: 2 K-PUR

Evaluation:

The tensile bond strength has been determined as mean value of 5 single values to the nearest 0,1 N/mm². The areas of failure have been assessed following DIN EN 13892-8.

Results

The results are to be taken from table 3.

Table 3: Tensile bond strength

No.	Tensile bond strength [N/mm ²]	Part of area of failure [%]
1	3,0	100 % A: between primer and topcoat
2	3,4	100 % A: between primer and topcoat
3	2,4	100 % A: between primer and topcoat
4	3,2	100 % A: between primer and topcoat
5	4,3	80 % A: between primer and topcoat 20 % C: in concrete
Mean value	3,3	

Legend A: Adhesion failure; C: Cohesion failure

Tensile bond strength, classification in accordance with DIN EN 13813: B 2,0

3.2 Impact strength

The impact strength has been tested following DIN EN ISO 6272-1 „*Paints and varnishes – Rapid deformation (impact resistance) tests – Part 1: Falling-weight test, large-area indenter (ISO 6272-1:2002)*”, in accordance with sub-clause 7.2, using the following test parameters:

Test parameters:

- Test apparatus: Falling weight test apparatus model 304, model Erichsen
- Falling weight: 1 – 2 kg
- Falling height: 40 cm to 102 cm
- Impact energy: 4 Nm to 20 Nm
- Diameter of ball: 20 mm

Evaluation:

The upper side of the coating of the test specimens has been loaded by the impact energy of a falling bolt with the above parameters.

The test positions have been examined by a lens with x10 magnification.. In accordance with DIN EN ISO 6272-1 no cracks or detachments shall occur at 4 of 5 test positions. This result corresponds to the impact strength IR (impact resistance) in accordance with DIN EN 13813.

Results

At impact energy of 4 and 8 Nm circular marks were visible at x10 magnification. However, no cracks or detachments have been established. At impact energy of 16 Nm cracks have been established at 3 test positions.

Impact strength, classification in accordance with DIN EN 13813: IR 8

3.3 Wear resistance

The wear resistance has been determined in accordance with DIN EN 13892-4 „*Methods of test for screed materials - Part 4: Determination of wear resistance BCA, German version EN 13892-4:2002*” (February 2003), using coated concrete test specimens in accordance with clause 2, with the following test parameters:

Test parameters

- Test apparatus: Abrasion test apparatus BCA tester , model Form + Test
- Load application: by 3 steel rolls
- Speed: (180 ± 15) r/min
- Cycles: 2850
- Incident load 65 kg

An apparatus with three tempered steel rolls which run with the above number of revolutions and incident load over a circular test area produces a wear on the surface of the coating. The wear resistance AR (abrasion resistance) using the BCA tester is assessed by measuring the wear depth after loading to the nearest 10 µm using a depth measurement gauge.

Results

No measurable wear noticed.

Wear resistance, classification in accordance with DIN EN 13813: AR 0,5

4 SUMMARY

On behalf of the company SCHOMBURG GmbH & Co. KG, Detmold, tests have been carried out at the Polymer Institut of the coating system

INDUFLOOR-IB 3357

in accordance with DIN EN 13813 „*Screed material and floor screeds – Screed materials – Properties and requirements, German version EN 13813:2002*“ (January 2003). In accordance with table 1 of this standard, these tests are specified as “normative”.

The following table gives a summary of the results and the corresponding classification in accordance with DIN EN 13813, table ZA 1.5 (screed based on synthetic resins).

Table 4: *Results and classification*

Sub-clause of report	Test	Results ¹⁾	Classification in accordance with DIN EN 13813
3.1	tensile bond strength	3,3 N/mm ²	B 2,0 (≥ 2,0 N/mm ²)
3.2	impact strength	8 Nm	IR 8 (8 Nm)
3.3	wear resistance	0 μm	AR 0,5 (≤ 50 μm)

1) as mean values

Flörsheim-Wicker, 2011-12-21


The head of the institute



J. Magner



The person in charge



T. Seitz