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## Test Report No. 2.1/24602/0684.3.1-2015e

### General

Issued: 01 September 2016

Order by: **Proline Systems GmbH**  
**Kratzenburger Landstraße 3**  
**56154 Boppard**  
**Germany**

Material: flooring system consisted of:

- wood substrate
- decoupling mat made of a glass nonwoven (white) bottomside and a fibreglass fabric topside (black)
- PROSECUREfibretec**  
(declaration by customer)
- cementitious adhesive
- Sopro's No 1**  
(declaration by customer)
- joint mortar
- Sopro Brillant PerlFuge 1-10 mm**  
(declaration by customer)

Order date: 20 May 2015

Samples : 09 June 2015

### Tests:

1. Behaviour of the system under a generated external dynamic load with an maximum deflection of L/360

The results apply exclusively to the specimens submitted  
The date of testing is reported on the enclosed enclosure/-es.  
Results are reported to the accuracy given in the standards. In statistical evaluation, the measured accuracy is taken.

**This test report contains 3 pages and 1 annex.**  
**It may not be published in parts.**



**1. General**

On behalf of Proline Systems GmbH the behaviour of the system (setup is shown in table 1) under a generated external dynamic load was tested.

The test samples were made by the customer in the laboratory of KIWA GmbH -TBU in Greven.

The structural load should generate a maximum deflection of  $L/360$  of the sample.

The samples were put into a servo hydraulic test machine where a dynamic load was generated. During the test, the samples were controlled for visible damage.

**1.1. Description of the system**

An approx.. 2 cm thick steel plate (500 mm x 500 mm) and 2 steal beams were used as underground.  
The test setup is shown in table 1.

Tab.1: sample setup

sample No.	description	setup (from bottom to top)	additional information
1	floor system	1. floorboard 1.1 squared timber 8/16 cm 1.2 wooden panel 21 mm 2. Sopro`s No. 1 3. PROSECUREfibretec 4. Sopro`s No. 1 5. unglazed tiles 200 x 200 x 9 mm with 6. Sopro Brillant PerlFuge 1-10 mm jointed	-

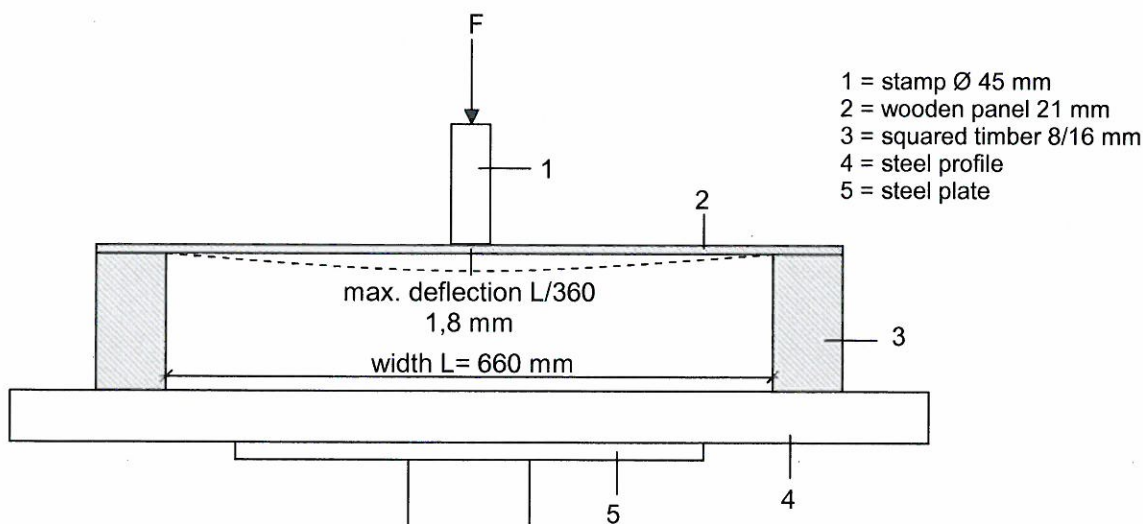


Image 1: setup of the system



**1.2 Test method**

The dynamic load was generated in a dynamic testing frame (shown in image 2, annex A1).  
 The load transfer was distance controlled with an centered placed stamp (Ø 45 mm).  
 In order to achieve a full contact of the stamp with the sample, a nonwoven was placed under the stamp (shown in image 3, annex A1).  
 The dynamic load was generated with a sinusoidal oscillation.  
 The deflection was controlled visually and measured with an distance measuring device (HBM WA 20) wich was placed below the wooden panel.

**1.3 Dynamic load**

Test parameters

Number of load alterations: 400.000  
 Oscillation form: Sinus  
 Deflection: 1,8 mm  
 Stamp: d = 45 mm

**1.4 Result of the dynamic load**

Tab.2: results of the dynamic load

test No.	production date	test time	cycles	deflection in mm
1	09.06.2015	14.07.2015 – 30.07.2015	400.000	1,8

No damage was identified on the topside at the end of the test.

i.V. Matthias Käsekamp, B. Eng.  
 (Deputy head of test laboratory)

i.A. Alexander Kriz, B. Sc.  
 (Staff of test laboratory)

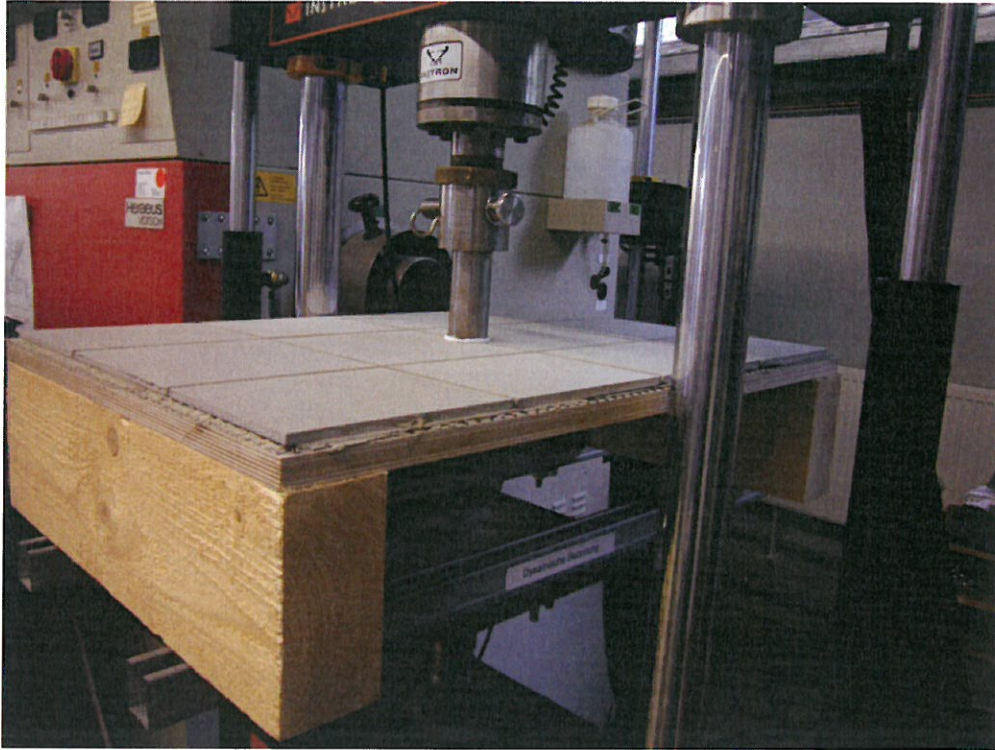


Image 2: Dynamic test system with sample



Image 3: stamp  $\varnothing$  45 mm

Test system