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# TESTREPORT PB0037-25

| | |
|---|---|
| Document number | I2322DO33-PB0037-25 |
| Client/Manufacturer: | ETS Europe BVBA<br>KMO-park Doornboom<br>Herentalsebaan 406/Unit D1<br>BE-2160 Wommelgem |
| Order: | Abrasion resistance test of a self-leveling floor with and without SiC parts |
| Sample Identification Client: | ECO RAPID SL / ECO RAPID SL+ |
| Standard | DIN EN 13892-3:2015-03 / DIN EN 13813:2003-01 |
| Date of sample receipt: | 20.04.2020 |
| Date of testing: | 29./30.04.2020 |
| Person in charge/Operator: | Dipl.-Ing. Thorsten Hagedorn<br>Michaela Jargosch |
| Test Device: | Abrasion test device according to Böhme |

This report consists of 4 pages including cover sheet. It contains no attachments.

Weimar, 25.03.2025

Steffen Schiecke
Head of Research Department

GmbH IAB - Institut für Angewandte Bauforschung Weimar gemeinnützige

Thorsten Hagedorn
Person in charge

## 1 Task

IAB Weimar gGmbH was commissioned by ETS EUROPE BVBA to test a self leveling floor with and without the addition of SiC for its abrasion resistance. Test specimens produced by the customer were delivered for this purpose. The test was carried out in accordance with DIN EN 13892-3: 2015-03 (Böhme method), the division into abrasion classes in accordance with DIN EN 13813: 2003-01.

## 2 Sample preparation and test procedure

The test specimens supplied were concrete slabs coated with the self leveling floor. The self leveling floor was applied to the substrate with a common layer thickness. Before the test, 3 standard samples (edge length 71 ± 1.5 mm) were sawn out of the test specimens supplied and these were then dried at 105 ° C to constant mass. The volume loss was determined via the mass loss and the dry bulk densities of the self leveling floor. The samples were at least 28 days old at the time of testing.

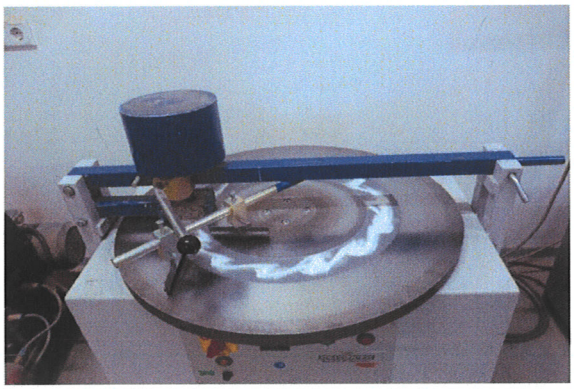

Fig. 1: Abrasion test device according to Böhme (with grinding material)

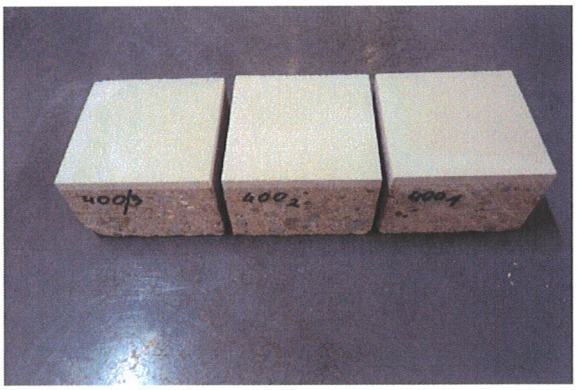

Fig. 2: Test specimens ready for testing

## 3 Test results

Tables 1 and 3 show the individual values for the dimensions, dry bulk densities and mass losses after each test cycle. Tables 2 and 4 contain the calculated values for grinding abrasion as the basis for classifying the self leveling floors in the abrasion resistance classes.

## 3.1 ECO RAPID SL without SiC

Table 1: Individual measured values of the 3 test specimens

| Length | Width | Hight | Area | Bulk density header | Mass [g] after | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Test | 88 | 176 | 264 | 352 |
| [mm] | [mm] | [mm] | [mm²] | [g/cm³] | start | rotations | | | |
| 70,74 | 70,89 | - | 501476 | 1,84 | 479,4 | 475,5 | 471,1 | 467,3 | 464,7 |
| 70,88 | 70,94 | - | 502823 | 1,84 | 481,3 | 478,6 | 475,5 | 472,9 | 469,1 |
| 70,80 | 70,26 | - | 497441 | 1,84 | 478,7 | 473,7 | 466,6 | 462,1 | 458,7 |

Table 2: Calculated values for classification in abrasion resistance class

| Abrasive wear | | |
|---|---|---|
| Mass | Loss of volume | Average loss of thickness |
| [g] | [mm³] | [cm³/50cm²] |
| 15 | 7989 | 8,5 |
| 12 | 6630 | |
| 20 | 10870 | |
| Average: | 8496 | |

The self leveling floor ECO RAPID SL can therefore be classified in the abrasion resistance class A9.

## 3.2 ECO RAPID SL+ with SiC

Table 3: Individual measured values of the 3 test specimens

| Length | Width | Hight | Area | Bulk density header | Mass [g] after | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Test | 88 | 176 | 264 | 352 |
| [mm] | [mm] | mm] | [mm²] | [g/cm³] | start | rotations | | | |
| 70,90 | 71,00 | - | 503390 | 1,84 | 498,4 | 496,0 | 494,1 | 492,5 | 491,1 |
| 69,76 | 71,02 | - | 495436 | 1,84 | 498,3 | 495,9 | 491,8 | 488,9 | 487,2 |
| 70,50 | 71,12 | - | 501396 | 1,84 | 493,7 | 491,7 | 489,3 | 486,8 | 484,9 |

Table 4: Calculated values for classification in abrasion resistance class

| Abrasive wear | | |
|---|---|---|
| **Mass** | **Loss of volume** | **Average loss of thickness** |
| **[g]** | **[mm³]** | **[cm³/50cm²]** |
| 7 | 3967 | **5,0** |
| 11 | 6033 | |
| 9 | 4783 | |
| Average: | 4928 | |

The self leveling floor ECO RAPID SL+ with SiC can therefore be classified in the abrasion resistance class A6.

The results relate exclusively to the sample material / test items.

End of test report.