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ABRASION RESISTANCE (BÖHME-TEST) OF CONCRETE STAIR TREADS

1 ORDER AND TASK

The order was made on 25.5.2022 by Jorma Parkkari from GlowWay Oy.

The task was to perform an abrasion resistance test to regular stair tread and stair tread with embedded photoluminescent and friction lists applying standard SFS-EN 1338 (so called Böhme-test).

2 SAMPLES AND TEST ARRANGEMENTS

Two concrete stair treads delivered by the client on 25.5.2022 with dimensions of 2000 x 140 x 30 mm³. Mosaic concrete stair tread with ID "V". Mosaic concrete stair tread with ID "L" that has an 8 mm wide photoluminescent list and 10 mm wide friction lists embedded in the middle of the stair tread.

Two test pieces with dimensions of 71*71*30 mm³ were sawn out of both stair treads. Test pieces sawn from stair tread "V" were given ID's V1 and V2, the test pieces sawn from stair tread "L" were given ID's L1 and L2. The test pieces were dried to weight equilibrium in a +105 °C ± 5 °C oven before the test.

Abrasion tests were carried out on the upper surface applying standard SFS-EN 1338.

3 RESULTS

Height of the test pieces were measured according to standard SFS-EN 1338, measurements were used to compare the abrasion of test pieces. Change in height of each test piece and an average of measurements in millimeters are shown in table 1.

Table 1. Change in height of samples

Sample	Change in height (mm)	Average (mm)
V1	2,47	2,36
V2	2,24	
L1	0,31	0,26
L2	0,23	

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