**INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.**
**třída Tomáše Bati 299, Louky, 763 02 Zlín**
**CSI Division – Centre of Civil Engineering**
Construction Testing Laboratory Zlín, K Cihelně 304, 764 32 Zlín - Louky

Testing laboratory No. 1007.1 accredited by ČIA according to ČSN EN ISO/IEC 17025:2018



# ACCREDITED LABORATORY TEST REPORT No. 415000183-01

| | |
|---|---|
| **Client:** | Lafarge Cement S.A.<br>VAT: PL5261060765 |
| **Address:** | Warsawska 110, 28-366 Małogoszcz, Poland |
| **Test:** | Laboratory measurement of airborne and impact sound insulation, measurement of the improvment of impact sound insulation according standards EN ISO 10140-2, ČSN EN ISO 10140-3, ČSN EN ISO 10140-1, Annex H |
| **Subject of the test:** | Anhydrite screed + Airium layer with 2x Goldflex mat |
| **Sample received on:** | 06.10.2020 |
| **Report elaborated by:** | Ing. Miroslav Figalla |
| **Place and date of issue:** | Zlín, 01.07.2022 |
| **Annex:** | The technical description of the floor construction – 1 page |

AKREDITOVANÁ ZKUŠEBNÍ LABORATOŘ č. 1007.1 INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.

Ing. Jiří Růžička
Head of Construction Testing Laboratory Zlín

Ing. Petra Hrdinová
Head of Accredited Testing Laboratory

**Test results:**

| Reg. No. | Product tested | Test results |
|---|---|---|
| 45/22<br>44/22 | – Anhydrite screed, thickness 46-47 mm<br>– 2 x Goldflex mat thickness 5 mm,<br>– Airium layer thickness 50 mm, 12 kg/m$^2$,<br>– reference concrete floor thickness 140 mm, 320 kg/m$^2$. | **$R_w$ ($C$; $C_{tr}$) = 61 (-2; -6) dB**<br>**$L_{n,w}$ ($C_I$) = 51 (-1) dB** |
| 46/22 | – Anhydrite screed, thickness 46-47 mm<br>– 2 x Goldflex mat thickness 5 mm,<br>– Airium layer thickness 50 mm, 12 kg/m$^2$. | **$\Delta L_w$ = 29 dB** |

The courses of sound reduction index, normalized impact sound pressure level and improvement of impact sound insulation depend on the frequency, and further measurement data are shown in standard measuring records on pages 5 - 7.

**Uncertainty of measurement**

The measurement uncertainty is expressed in accordance with ČSN EN ISO 12999-1 using a standard deviation of reproducibility. Measurement results including uncertainty are as follows:

$R_w$ = (61,4 ± 2,4) dB $R_w + C$ = (59,5 ± 2,6) dB $R_w + C_{tr}$ = (54,6 ± 3,0) dB

$L_{n,w}$ = (50,3 ± 3,0) dB $L_{n,w} + C_I$ = (50,2 ± 3,0) dB

$\Delta L_w$ = (29,0 ± 2,2) dB.

The values are determined for the expansion factor k = 2, which corresponds to a confidence level of 95% for the two-sided interval.