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

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No. 415000183-03

ACCREDITED LABORATORY TEST REPORT No. 415000183-03

Client: Lafarge Cement S.A.
VAT: PL5261060765

Address: Warszawska 110, 28-366 Małogoszcz, Poland

Test: Laboratory measurement of airborne and impact sound insulation, measurement of the improvement 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 Ethafoam 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

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Head of Accredited Testing Laboratory

Note: The results given in this Test Report apply only to the sample tested by our laboratory!
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Test results:

Reg. No.	Product tested	Test results
51/22 50/22	– Anhydrite screed, thickness 46-47 mm – Ethafoam mat thickness 5 mm, – Airium layer thickness 50 mm, 12 kg/m ² , – reference concrete floor thickness 140 mm, 320 kg/m ² .	$R_w (C; C_{tr}) = 61 (-2; -6) \text{ dB}$ $L_{n,w} (C_i) = 52 (-1) \text{ dB}$
52/22	– Anhydrite screed, thickness 46-47 mm – Ethafoam mat thickness 5 mm, – Airium layer thickness 50 mm, 12 kg/m ² .	$\Delta L_w = 27 \text{ dB}$

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:

$$R_w = (61,1 \pm 2,4) \text{ dB} \quad R_w + C = (59,3 \pm 2,6) \text{ dB} \quad R_w + C_{tr} = (54,5 \pm 3,0) \text{ dB}$$
$$L_{n,w} = (51,4 \pm 3,0) \text{ dB} \quad L_{n,w} + C_i = (51,2 \pm 3,0) \text{ dB}$$
$$\Delta L_w = (27,9 \pm 2,2) \text{ dB}.$$

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