



CZECH TECHNICAL UNIVERSITY IN PRAGUE
FACULTY OF CIVIL ENGINEERING –
TESTING LABORATORY
testing laboratory No. 1048 accredited by
CIA under ČSN EN ISO/IEC 17025:2018
Thákurova 2077/7, Praha 6, 166 29



L 1048

EXPERT LABORATORY OL 124

Thákurova 2077/7, Praha 6, 166 29

Phone: +420224357177

E-mail: jiranek@fsv.cvut.cz

No. of copies: 2

Copy No: 1

No. of pages: 3

Page No.: 1

No. of annexes: 0

No. of annexes pages: 0

Order No: 8602600A020

TEST REPORT No: 124019/2026

upon the test : **Determination of the radon diffusion coefficient
of GEFITAS® ALU 1500 RS MATT carried out in accordance
with the ISO/TS 11665-13**

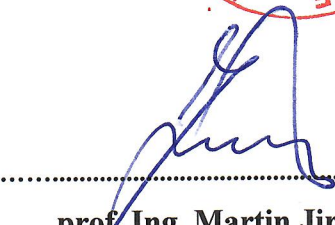
Client's name and address:

Gefinex GmbH
Jakobsdorfer Straße 1
D-16928 Pritzwalk
Germany



Date of issue: 19.3.2026

Approved by:


.....
prof. Ing. Martin Jiránek, CSc.
Technical head of OL 124 laboratory

This report can only be reproduced in its entirety; in part only with a written consent of the testing laboratory. The test results refer exclusively to the subject of the test (test sample).

Subject of the test: #GEFITAS® Alu 1500 RS matt# – a multilayer membrane comprising AL foil with PE coating, HDPE mesh, and non-woven fabric on the bottom surface

Testing procedure: Determination of the radon diffusion coefficient

Test regulation: ISO/TS 11665-13

Test samples were sampled or manufactured by: Client – results refer to the samples as they were taken over

Date of taking over test samples: 5.3.2026

Samples taken over by: prof. Ing. Martin Jiránek, CSc.

Marking of test samples: 17/26/J (1 – 5)

Manufacturing site of test pieces: –

Date of manufacturing test pieces: –

Test pieces manufactured by: –

Marking of test pieces: –

Test execution date: 6.3.2026 – 18.3.2026

Test execution place: laboratory OL124 – D2044d

Testing device:

Radon detectors TSR-4 of the TERA system (12424)

Measuring system with ionization chambers operating in current mode (12420)

Radon concentration measuring system RM-2 (12428)

Micrometer (12403)

Name of the person who performed the test:

prof. Ing. Martin Jiránek, CSc., Ing. Veronika Kačmaříková, Ph.D.

Potential data on deviations from the test regulation: –

Data on uncertainties of quantitative results: The expanded uncertainties of measurement $\pm U$ mentioned are the product of standard measurement uncertainties and the expansion coefficient $k = 2$, which provides a confidence interval of approx. 95 %.

The report prepared by: Ing. Veronika Kačmaříková, Ph.D.

The report checked by: –

Test samples

The dimensions of the samples were 135 x 325 mm (effective area 293.10^{-4} m^2) and their thickness was 0,25 mm (without a fabric). The fabric was removed from the samples before testing. The tested joint was an overlap sealed with 200 mm wide sealing tape applied across the top surface of the membranes.

Test method

Radon diffusion coefficient was determined according to the method A of ISO/TS 11665-13. The tested samples were placed between the source and the receiver containers each with a volume $2,7.10^{-3} \text{ m}^3$. Radon diffuses through the samples from the source container, which is connected to the radon source RF 100, to the receiver containers. Concentrations on both sides of the tested samples are measured continuously by radon detectors TSR-4 of the TERA system (receiver containers) and current mode ionization chambers (source container). Radon diffusion coefficient was derived from the process of fitting the numerical solution of the one-dimensional time-dependent radon diffusion equation to the curves of radon concentration measured in the receiver containers.

Laboratory conditions

#GEFITAS® Alu 1500 RS matt# – material

Steady state radon concentration in the source container: $7,7 \pm 0,1 \text{ MBq/m}^3$

Maximum radon concentration in the receiver containers: below the detection limit

#GEFITAS® Alu 1500 RS matt# – joint with a top tape

Steady state radon concentration in the source container: $9,4 \pm 0,1 \text{ MBq/m}^3$

Maximum radon concentration in the receiver containers: below the detection limit

Test results

The resulting mean values of determined quantities including expanded measurement uncertainty, are listed in the following tables in the form of (mean $\pm$ U).

TESTED MATERIAL	#GEFITAS® Alu 1500 RS matt#	Joint with a top tape
Rn diffusion coefficient $D \text{ (m}^2/\text{s)}$	$< (1,7 \pm 0,2).10^{-14}$	$< (2,4 \pm 0,3).10^{-14}$
Rn diffusion length $l \text{ (m)}$	$< (9,0 \pm 1,1).10^{-5}$	$< (1,1 \pm 0,1).10^{-4}$
Rn resistance $R_{Rn} \text{ (Ms/m)}$	$> 42\,431 \pm 5\,049$	$> 22\,872 \pm 2\,722$

The radon diffusion length was calculated according to the equation $l = \sqrt{D/\lambda}$ and the radon resistance as follows: $R_{Rn} = \frac{\sinh(d/l)}{\lambda \cdot l}$, where $\lambda = 2,1.10^{-6} \text{ s}^{-1}$ and $d = 0,25 \text{ mm} = 0,25.10^{-3} \text{ m}$.

Sampling performed by the client - results refer to the samples as received.

data marked in this way were supplied by the client; OL124 is not responsible for them.