

IAF-Radioökologie GmbH | Wilhelm-Rönsch-Straße 9 | 01454 Radeberg

Hauff-Technik GmbH & Co. KG

Robert-Bosch-Str. 9

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Radeberg, 2015-12-07

Certificate

Determination of the Radon Diffusion Coefficient

The radon diffusion coefficient D of the material "EPDM" as supplied by the client

Hauff-Technik GmbH & Co. KG

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has been experimentally determined by IAF-Radioökologie GmbH using a double chamber system. The results of the "radon tightness" are summarized in the following table.

Description of variables	Measured values
Diffusion coefficient D	$4.3 \cdot 10^{-11} \text{ m}^2/\text{s}$
Diffusion length L_D	4.53 mm
Material thickness d	30.0 mm
Area of the material F	196 cm ²
Test parameter $R = d/L_D$	6.63
Result	R > 3, i.e., radon tight

A material is rated "radon tight" if its thickness exceeds the radon diffusion length of the material at least by a factor 3. Otherwise the material is rated "not radon tight". A "radon tight" material is defined by a material which, when covering a radon-exhaling surface, reduces the exhalation rate by at least 95% compared to the bare surface.

Dr. rer. nat. habil. Hartmut Schulz

Managing Director