

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

DOYMA GmbH & Co
Dichtungssysteme
Brandschutzsysteme
Industriestraße 43-57
28876 Oyten



Radeberg, 2017-08-08

Certificate

Determination of the Radon Diffusion Coefficient

The radon diffusion coefficient D of the sealing system "Quadro-Secura® E2" as supplied by the client

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has been experimentally determined by IAF-Radioökologie GmbH using a double chamber system. The results are provided in the following table.

Description of variables	Measured values
Diffusion coefficient D	$3.74 \cdot 10^{-10} \text{ m}^2/\text{s}$
Diffusion length L_D	13.35 mm
Material thickness d	80 mm
Area of the material F	314 cm ²
Test parameter $R = d/L_D$	5.99
Result	R > 3, i.e., radon tight

The result "radon tight" also applies to the sealing systems Quadro-Secura® E1, Quadro-Secura® E1/breit and Quadro-Secura® E2/breit.

A sealing system is rated "radon tight" if its thickness exceeds the radon diffusion length of the material at least by a factor 3. Otherwise the sealing system is rated "not radon tight". A "radon tight" sealing system 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.

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