IAF - Radioökologie GmbH

Radionuclide Laboratory | Radiation Safety | Radiological Consultants

Wilhelm-Rönsch-Straße 9
01454 Radeberg

Phone +49 (0) 3528 48730-0
Fax +49 (0)3528 48730-22

E-Mail: info@iaf-dresden.de
www.iaf-dresden.de

Managing Directors:
Dr. rer. nat. habil. Hartmut Schulz
Dr. rer. nat. Christian Kunze
Dr. rer. nat. Holger Hummrich

Trade register: HRB 9185
Register court: Dresden

Bank account:
HypoVereinsbank Dresden
IBAN: DE92 8502 0086 5360 1794 29
SWIFT (BIC): HYVEDEMM496

DAkkS Deutsche Akkreditierungsstelle D-PL-11201-01-00

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

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

Radeberg, 2018-01-26

Certificate

Determination of the Radon Diffusion Coefficient

The radon diffusion coefficient D of the sealing system "Quadro-Secura® Basic R4+" as supplied by the client

DOYMA GmbH & Co
Industriestraße 43-57
28876 Oyten

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	$2.45 \cdot 10^{-10}$ m²/s
Diffusion length L_D	10.80 mm
Material thickness d	50 mm
Area of the material F	789 cm²
Test parameter $R = d/L_D$	4.63
Result	**R > 3, i.e., radon tight**

The result “radon tight” also applies to the sealing systems Quadro-Secura® BP+ und Quadro-Secura® E-BP.

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.

Dr. rer. nat. habil. Hartmut Schulz
Managing Director