



## CERTIFICATE

### ELAPROOF WORKS AS A RADON BARRIER

Radon gas in indoor air inside the buildings is a common problem in Finland. Radon is an odourless, tasteless, colourless radioactive noble gas that increases the risk of developing lung cancer. As a result, the Ministry of Social Affairs and Health in Finland has set maximum limits for radon concentrations indoors of 300 Bq/m<sup>3</sup> in old buildings and 200 Bq/m<sup>3</sup> in new buildings.

One option to prevent radon gas leaks indoors is to seal potential leakage pathways in buildings. The most common leakage path is the shrinkage gap between the concrete slab and the plinth, through which the under pressure in the apartments absorbs the radon-containing air from the soil. In addition, the penetrations and the various joints in the building foundation can form a significant leakage pathway for radon-containing air. The ElaProof coating can be used for sealing various leakage routes in buildings.

Radon transmittance through ElaProof coating has been examined in RISE, Sweden (Research Institutes of Sweden AB, impartial research institute) in accordance with SP Method no. 3873.

The results are presented in Table 1. Both measured values meet the requirements of the Norwegian Building Research Institute SINTEF Byggforsk for radon membranes (radon transmittance <math>2 \cdot 10^{-8}</math> m/s and radon resistance >math>5 \cdot 10^7</math> s/m). According to RISE measurements, ElaProof coating prevents radon gas leakage by more than 98%.

**Taulukko 1.** Radon transmittance and resistance results. \*

Material	Thickness (mm)	Radon transmittance, P (m/s)	Radon resistance, Z (s/m)
ElaProof	0,8-1,2	$1,2 \cdot 10^{-8}$	$8,5 \cdot 10^7$



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\*The original test report is available on request.