

Simple sealing of floors

Note: Sealing of floors is only likely to prove to be a practical, cost effective solution if there are major gaps and cracks that can be easily filled.

Sealing concrete floors

Simple sealing of small gaps around service penetrations such as pipes and cables, and cracks in the floor itself can usually be achieved using gun-applied mastic or bathroom sealants. Larger holes will first need to be filled using sand cement mortar, expanding foam or similar sealant, with any subsequent shrinkage cracks sealed using gun-applied mastic or bathroom sealant.

Other sealing such as sealing of the continuous joint between the floor and the wall can be achieved with gun-applied sealant. Unfortunately it is likely to prove difficult and disruptive to carry out because of skirtings, and fixtures and fittings obstructing access.

It is important in all cases to clean cracks or gaps to remove loose or flaking material before applying sealant.

Stone flag or brick paved floors

Sealing has to be confined to simple sealing of major gaps around services. Improved jointing between stone flags or brick paviors can help but is unlikely to give significant reductions in radon entry.

Suspended timber floors

You should only consider sealing major gaps, for example where services pass through the floor or where pieces of boarding are missing, using gun-applied or expanding foam sealants. **Do not seal suspended timber ground floors with sheet materials such as polyethylene sheet** as it can encourage timber rot problems.

Suitable sealants

There are a wide range of sealants available commercially and most of them have suitable performance characteristics for sealing cracks and gaps in floors. Of those available the following types can usually be obtained from DIY stores and builders merchants:

- **Acrylic (emulsion) sealants** – usually gun-applied are ideal for small gaps and cracks, will accommodate movements up to 10%, can be readily painted on curing which takes a day or two.
- **Silicone sealants (general purpose and 'low modulus' types)** – usually gun-applied are ideal for small gaps and cracks, will accommodate movements up to 20%, but are more expensive than acrylic sealants and are not readily paintable.
- **Expanding polyurethane sealants** – dispensed from a pressurised can they are ideally suited to filling larger holes and gaps.
- **Polymer-modified cement mortars** – principally of use for filling large gaps and holes.

radon solutions



Further information

More detailed guidance is available in BRE Report BR239 *Sealing cracks in solid floors: a BRE guide to radon remedial measures in existing dwellings* obtainable from BRE Bookshop, BRE Garston, Watford, WD25 9XX, telephone 01923 664262, e-mail bookshop@bre.co.uk, or visit www.BREbookshop.com

- for further practical advice about work to reduce radon levels

Contact BRE Radon Hotline 01923 664707 www.bre.co.uk/radon

Disclaimer

It should be noted that BRE cannot guarantee that the measures described on this sheet will reduce the radon level in your home, however similar measures have regularly proven successful elsewhere in the UK.

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Other useful contacts

Defra 020 7082 8498
www.defra.gov.uk/environment/radioactivity/radon

NRPB 0800 614529 www.nrpb.org/radon

The Radon Council 01932 221212 www.radonhotline.org

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