Tip Sheet for

Insulating Your Home

After plugging the holes in your house (see our tip sheet on Draft proofing your home at www.greenmoves.com.au/freeinfo), the next best bang for your buck is insulation. Insulation is very effective in a home because it:

- Saves energy and greenhouse gas emissions
- Improves comfort levels all year-round
- Reduces the need for heating and cooling
- Payback time is within a few years (3-5 years depending on your charges)
- Helps eliminate condensation on walls and ceilings
- Some types of insulation can be used for sound proofing

The effectiveness of insulation is measured in 'R' values, the higher the 'R' value, the higher the insulation level. Check with your local insulation installer or sustainability advisor for accurate advice on what is suitable for your area. In Melbourne, the recommended R values are R3.5 for ceilings, R2 for walls and R1 for the floor.

To get the best performance it must be installed correctly with minimal gaps. Badly installed insulation will give you little benefit. Go for 'eco-friendly' insulation such as wool or recycled materials, it's better for you and the environment.

Having your home properly insulated reduces your heating and cooling costs significantly. As a rough guide you could loose up to 35% of your heat through the ceiling, 25% through the walls and windows, up to 25% through gaps around the home and up to 15% through the floor.

There are 2 types of insulation, they are:

- ***Bulk Insulation*** which is commonly known as batts, boards, blankets or loose fill. They work by containing millions of tiny pockets of still air trapped in the material. This provides the materials insulation effect so it is important not to compress bulk insulation.
- ***Reflective Insulation*** is made of thin sheets of highly reflective aluminium foil laminate which reflects heat while absorbing and emitting only a small amount. It needs to work in conjunction with a still air layer for maximum effectiveness.

The Ceiling

In Melbourne the recommendation is to have a minimum level of R3.5 insulation in the ceiling, the higher the number the more insulation value you get. Good insulation is rendered ineffective if ceiling vents, down lights and other 'holes' are not covered. Ensure you install closable exhaust fans, draft stoppers and fire resistant down light mitts to maximise the benefit of your insulation. Think of it as a blanket over your ceiling to keep your house warm, you don't want any 'holes'.

Don't forget – check our Draft Proofing your home tip sheet, which can be found at www.greenmoves.com.au/freeinfo and make sure those chimneys, skylights, and other vents are catered for.

Note that when using bulk insulation, it is important not to compress it as this reduces its effectiveness significantly.

Wall Insulation

Opening up walls to install insulation is usually difficult, so it's best to do this during building or renovation work. Most new homes now have an insulation 'wrapper' around the outside of the walls, with insulation bats installed before the internal plaster is fixed. This helps to weatherproof and minimise drafts, while reducing heat loss/gain through walls. Again, gaps will reduce the effectiveness of even the best insulation so make sure all gaps, including those around windows and doors, are well sealed.

Floor Insulation

If you are building new you have a great opportunity to insulate your floor. If you're using a concrete slab the main options are waffle pod construction or polystyrene sheets. Insulation levels range from R1 value to as high as you like but a maximum of R2 is considered to be more than sufficient. The higher the value the better and anything R1 value and over tends to give good benefits so, if you can, go R1.3 or R1.5 and you'll get really good results.

If you're looking to insulate an existing floor the options are as follows:

- ***Concrete slab or timber floor with no under floor access***, consider floor coverings such as carpet, linoleum or floating floors with good quality, insulating underlay.
- ***Timber floors with underfloor access*** – Polystyrene, Foil Board and Air cell are some that are available and known to be effective. The right one will depend on your particular situation.
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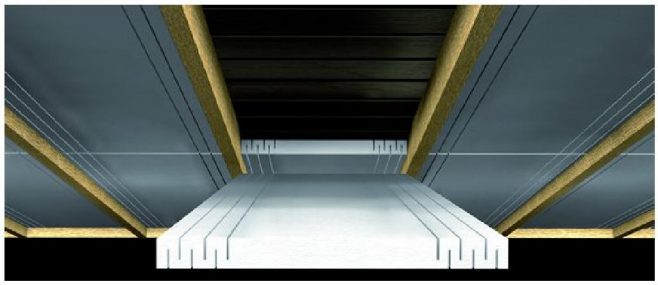
Earthwool bats

Blow in Eco-foam



Under floor polystyrene

For any queries or additional information on this tip sheet please contact Green Moves Australia on (03) 9024 5515 or 1300 898 742

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