



# insulation

**green at heart**  
Your one-stop shop  
for building sustainability



**Insulation is typically the most cost effective way to improve a home's energy efficiency. Although all newly-built homes must be insulated, many older homes, up to 40 per cent of Australia's housing stock, remain uninsulated.**

## Efficient cooling & other benefits

Insulation creates a barrier to heat transferring through ceilings and walls. In summer insulation keeps your home cooler by reducing the amount of heat entering your home from the roof space above.

In winter the insulation can help trap heat inside. In hot tropical regions in winter, it is best to make sure that the home is well ventilated to let the warm air escape and be replaced by cooler outdoor air. This can also be assisted by roof and eaves ventilation.

## Save money on your bills

If your home is uninsulated you may be paying much more than you need to on your energy bills. Once installed, households could save around \$200 per year on their energy bills, as well as improve the comfort and value of their homes.

## Types of insulation

There are three main types of insulation;

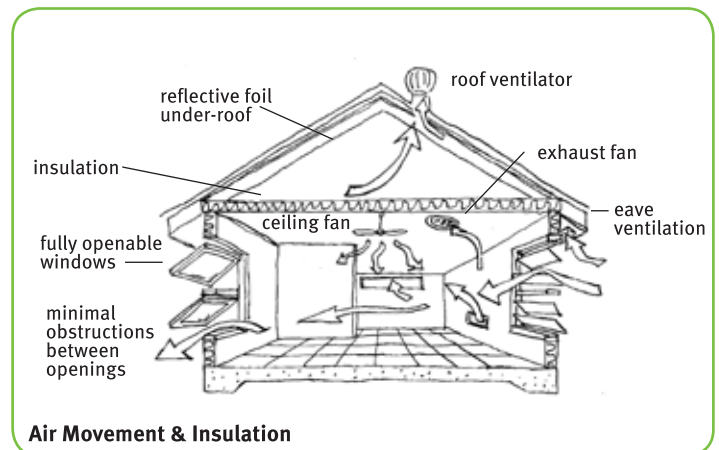
- loose fill,
- batts, and
- reflective foil.

The best type for your home can depend on the type of ceiling cavity and access. We prefer batt insulation for its proven effectiveness and predominantly use Earthwool for its environmental properties.

Earthwool is manufactured using 60% recycled glass and bonded using a bio-based technology free from formaldehyde, phenols, acrylics with no artificial colours, bleach or dyes added. Earthwool offers improved indoor air quality when compared with conventional mineral wool. Other benefits include acoustic insulating properties, proven long term performance, moisture and vermin resistance.

## More about R-Values

The most important thing to consider when choosing insulation is the R-Value. The R-Value is the measure of the materials performance and its resistance to heat flow. The higher the R-Value the greater the resistance and the better the performance. It is important when choosing your insulation to ask for a product R-Value (of the material itself) rather than a system R-Value (of the roof product, airspace and product) as this will give you a better indication of its performance.



## Making the most of your insulation

In combination with insulating your home, to further reduce your bills and improve thermal comfort, we recommend installing a roof ventilator to remove excess heat from your roof cavity. Types include ridge vents or whirly bird styles. You may also wish to install eaves vents to draw cooler air in to replace the warmer air expelled through your roof ventilator.

When using air conditioners in conjunction with insulated roof and walls it is best to zone areas to maximise the effectiveness. For example, having a door on your living area or bedrooms and using the air conditioning to contain cold air. Window tinting or external shading devices can also help keep your home cool in summer.

## The problem with recessed downlights

Chief amongst pre-installation considerations is the problem of recessed down-lights.

Recessed down-lights, and in particular, halogen low voltage down-lights run very hot and are a fire hazard. They make it impossible to properly insulate your ceiling.

Down-lights should either be removed and replaced with compact fluorescent downlights or globes replaced with LEDs. Alternatively a suitable downlight protector cover should be used.