HOW TO INSTALL INSULATION

INSTALLING WALL INSULATION

Many of the guidelines for ceiling insulation can be followed when installing insulation in your walls.

Select the correct insulation for the job (wall insulation) and the correct R-rating for the area you live before you calculate how many bales of insulation you need. Coverage area per bale varies with different types and grades of insulation.

Wall insulation is designed to fit snugly between standard framing, but older houses with different stud spacings may require the insulation to be cut to fit. Use a sharp knife, a straightedge and a cutting board to do this. If cutting is required, cut 5 to 10mm oversize for a friction fit. Use your cutting board. DO NOT CUT AGAINST FRAMING and risk cutting through electrical wiring.

You can use offcuts to fill small gaps in the framing around doors and windows, but remember to cut to size. Forcing offcuts of insulation into a too-tight space will affect its efficiency.

Fit insulation behind electrical wiring and pipes or plumbing. This may also require insulation to be partially cut to accommodate the wiring or pipes. To see how to do this correctly check out the How to Install Wall Insulation guide on our website.

INSTALLING UNDERFLOOR INSULATION

Many of the guidelines for ceiling and wall insulation can be followed when installing underfloor insulation.

Select the correct insulation for the job (floor insulation) and the correct R-rating for the area you live before you calculate how many bales of insulation you need. Coverage area per bale varies with different types and grades of insulation.

Start working at the furthest point away from the access and work back towards this point.

Joist spacings under the floor can often be uneven, so be prepared to measure and cut accordingly.

Unlike the ‘friction fit’ of the ceiling and wall insulation, underfloor insulation is fitted a little differently. Each piece of insulation needs to be cut at least 30mm wider than the distance between the joist faces. Use your cutting board. DO NOT CUT AGAINST FRAMING and risk cutting through electrical wiring.

Slip the insulation into place, pushing one edge against the face of the joist and up to the underside of the floor. As you push the other side into place against the opposite joist, the edge will fold down the face of the joist. This installation method helps ensure there are no gaps between the insulation and the joists.

If you’ve cut a little too big and the folded section protrudes beneath the bottom of the joist, just trim it back.

Pink® Batts® supply flexible installation rods with their underfloor insulation. Just cut 20mm longer than the space between the joists, bend to fit into position against the underside of your insulation and let them spring back into place. Use three installation rods per section of insulation to hold it up in place.

Do not cover over wiring with insulation.

Cut insulation around plumbing, pipes or sub-framing.

R-Rating

R-ratings are basically a measure of insulation capability. If you live in the South Island or around the central North Island, (the blue area on the map) building regulations require you use a higher spec, higher R-rated insulation. The Mitre 10 stores in your area will stock the insulation required.

WHAT YOU’LL NEED

Take this shopping list into store with you to make sure you get everything in one trip. For this project the following materials and equipment are required:

MATERIALS:
- Dust Mask
- Safety glasses
- Rubber faced gloves
- Insulation
- Utility knife
- Tape measure
- Cutting board
- Straight edge
- Work light (ceiling and underfloor)
- RCD
- Broom handle or similar(ceiling only)
- Planks (minimum of 2 at 1.2 metres long)
- Ladder (wall and ceiling)

MITRE 10 EASY AS

CLIMATE ZONE MAP

Red Zone

Blue Zone

Mitre 10

DIY IN OUR DNA
Keeping Insulation Simple

Insulating your home – ceiling, walls or underfloor – is basically a process of filling the gaps between your house framing with an effective thermal barrier.

- You need the right insulation for the job – wall insulation for walls, ceiling insulation for ceilings, underfloor for floors.
- You need the right insulation for your area – colder areas need a higher “R” rating.
- You need to be accurate – insulation should be cut slightly oversize for a “friction” fit. Too small leaves gaps and too big compresses the insulation material, reducing its effectiveness.
- And you need to be safe. You’ll be working around electrical wiring and pipes, you’ll be working in awkward spaces and if you’re up in the roof space there’s always the danger of stepping between the framing and falling through the ceiling. Just follow the recommended safety procedures and safety-wear guidelines.

WHAT TO WEAR

Old roof cavities and underfloors are dusty places at the best of times, and glass wool insulation can produce skin irritation so it pays to wear protective clothing.

Disposables are a must and a cool shower after the job is the ideal way to keep things comfortable.

Correct Clothing
Loose fitting, full cover clothing – long sleeves, long pants, or better still, overalls – will lessen the chances of skin irritation.

Dust Mask
A disposable cotton pad mask is generally suitable to help prevent discomfort. Increased protection is available with a more sophisticated mask such as a R1000 Respirator.

Safety Glasses
Safety glasses are also a good idea, particularly when installing underfloor insulation where you’re working underneath/looking up at the job.

Gloves
Rubber palmed gloves are recommended to help prevent skin irritation. Washing up gloves are fine.

Footwear
Sturdy footwear is also necessary to maintain safety. And because you’re going to be working around electrical wiring, rubber-soled footwear is a must.

INSTALLING CEILING INSULATION

- Measure up your ceiling area (basically the same as your floor area).
- Select the correct insulation for the job (ceiling insulation) and the correct R-rating for the area you live before you calculate how many bales of insulation you need. Coverage area per bale varies with different types and grades of insulation. Ask in-store for more information or visit www.mitre10.co.nz.
- Before you start, set up your ladder, get up through the manhole/access with a couple of planks and a worklight and just have a look around. You’ll get a better idea of what the job involves (it is possible to install new insulation over old insulation, provided the old insulation is level) and you’ll be able to see if anything needs tidying up before you start. Check for exposed nails, damaged or exposed wiring and pests such as bees or wasps. Avoid working in the heat of the day as temperatures can get dangerously high in the roof cavity, and always treat all wiring as live.
- Once you’re ready to start the job, get everything set up – planks, work light, tools, a couple of bales of insulation, and get back up there with all your gear on – overalls, mask etc.
- Start in the area furthest away from the access and measure up the space between the framing. Use your cutting board and straight edge to cut 10 to 20mm oversize for a snug friction fit. You don’t want to leave gaps but forcing too-big insulation between the framing reduces its efficiency. Use your cutting board. DO NOT CUT AGAINST FRAMING and risk cutting through electrical wiring.
- Use the push rod/broom handle to push the insulation carefully into areas you can’t reach.
- When putting the insulation in place, ensure there is at least 25mm between the top of the insulation and the underside of the roofing material or roofing paper. This prevents any moisture in the underlay from wicking into the insulation. It may be necessary to cut away a small section of the insulation to achieve this.
- Never cover downlights with insulation. Downlights require the insulation to be cut around them to provide clearance so heat from the light is not trapped. Failure to do so can result in fire through overheating. The new, CA-Rated, recessed downlights don’t require any clearance and incandescent lights need 50mm clearance but if you’re not 100% sure of the rating of your downlights, YOU MUST LEAVE MINIMUM CLEARANCE of 200mm. Talk to staff in the lighting department at Mitre 10 for advice on downlight ratings.
- When working around plumbing or pipes, cut a slit in the insulation and wrap it snugly around the pipes.
- When working around wiring, slip the insulation underneath the wiring if possible as wiring that is covered (especially in older homes) can overheat.
- Don’t forget to measure and cut one last piece of insulation to fit over the access panel. Once you’ve cleared up and are ready to exit the roof space, just position it so it lowers into place as you close the access panel cover.

Handy Hints:
- When you’re putting in ceiling insulation, you probably only need a couple of bales of insulation up into the ceiling at a time but get each bale up there BEFORE you cut it open. The insulation expands so much when you cut the plastic wrap, you’ll end up having to get it up through the ceiling access one sheet at a time.

A well insulated home means increased comfort and decreased heating bills. And if you follow the safety and installation instructions, putting in your own insulation is actually a pretty straightforward DIY project.

Limitation of Liability

This project planner has been produced to provide basic information and our experienced staff are available to answer any questions you may have. Because this planner is general in nature, neither your Mitre 10 supplier nor their staff are responsible for the application of these design principles in any particular case, as the contents of this brochure may need to be modified for the particular site and circumstances. Mitre 10 is not responsible for the quality of work carried out on the goods by the consumer and is not responsible for the design or construction of any structure in which the goods are incorporated. Where applicable consumers should ensure that they comply with The New Zealand Building Code and/or Local Body Bylaws in respect of any such structures.

Consumers are advised to call a qualified tradesman such as a builder, electrician or plumber where expert services are required. Mitre 10 will not be liable for any consequential loss howsoever arising from the use of goods sold, nor for any loss caused by defective or inadequate structures in which goods are incorporated.

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