FREE TO ALL BUILDERS

BRANZ

BUILDER'S MATE

ISSUE 31 | AUGUST 2008

Polystyrene tightly fitted under a floor, and gaps sealed to ensure a still air space.

Getting warmer

Building Code changes mean that new houses require better insulation. But choosing the right level of insulation is only half the story.

To make sure that a house still meets the new requirements after it is built, designers and builders need to ensure:

- the insulation is properly installed
- the framing is deep enough for the specified insulation to fit properly
- the 'thermal bridge' effect of the framing is taken account of – the framing carries heat to the outside.

The first point – good installation – can make a big difference to how well the insulation actually does its job. >

INDUSTRY NEWS

Affordable housing

The Department of Building and Housing is seeking comments on a proposed Compliance Document for simple, affordable housing.

The document aims to include all the information and requirements necessary to produce a small, standardised home using common materials and solutions. It will include construction details, Building Code and Standards requirements. The type of house it covers will be ideal for first home buyers and retirees.

A key purpose of the document is to encourage designers and builders to produce more low-cost homes. Many homes being built today are highly customised and bigger than before – the average new house is now about 200 m^2.

Using the Compliance Document will be voluntary.

For more information visit www.dbh.govt.nz/simple-housing or for a hard copy call 0800 242 243. Comments are due by 29 August.

HAMMER 'N' NAILS

> Continued from previous page

Research shows that even small gaps can halve the insulation's effectiveness at that part of the roof or wall or floor!

When installing any insulation it is critical that:

- there are no gaps between insulation or between insulation and framing
- insulation is not squashed or folded
- in a drained cavity wall construction, the insulation does not push the wall underlay across the cavity.

With underfloor foil, drape it properly to create a still air space. To be effective:

- sheet joints should be lapped and taped so no air flow can pass through
- there should be no gaps between the foil end and adjacent framing
- the drape should be no less than 100 mm
- the foil should not have cuts or tears
- in an open sub-floor the foil should be protected, ideally with sheet material fixed underneath it.

With the 'thermal bridge' effect of framing, the more framing in a wall, the greater the heat loss. This needs to be considered when calculating heat loss through the constructed roof or walls (insulation, framing, lining and cladding included). Steel framing has greater heat loss than timber, and thermal breaks need to be installed (see E3/AS1).

For more information see:

- BRANZ Bulletins 494 *Thermal insulation of new houses* and 496 *Retrofitting thermal insulation*
- the BRANZ *House Insulation Guide* (3rd edition 2007), and
- the BRANZ H1 Support Page at www.branz.co.nz.

The changes to Building Code Clause H1 Energy efficiency came into effect in the South Island and the North Island Central Plateau last October, and in the North Island south of the Franklin and Thames-Coromandel Districts on 30 June this year. The remainder of the North Island will follow on 30 September this year.

Dribblings from the Old Geezer

Probably all of us are two-faced and hypocritical at times. We tell others to do things one way and then we short-cut it ourselves. Maybe at work we insist on a particular safety standard but at home we're not so good.

I know I've got a couple of dark secrets that don't reflect well on me. One might have involved a neighbour's painter tying an opened-out ladder of mine onto his long extension ladder, then sending his young, much lighter lad up to paint a third-storey eaves. Fortunately no harm came of it, but if it had, I would possibly have been as liable as the perpetrators. Why? Because I knew it was dodgy and did nothing to stop it.

It was so scary I just told them they were idiots and that the Labour Department would have their guts for garters, and then went out because I didn't want to watch. What should I have done? First I shouldn't have let them borrow my ladder. I should also have more forcefully made the point that I would be jointly at fault and I wasn't prepared to risk that. I have raised my standards since then and have resolved to raise them higher. Might even have my home tools and leads tested and tagged.

Des Molloy

Plastic kee warmer ar

1 Thermal breaks are good news

Aluminium window frames are good conductors of heat, and that's bad news on cold days because they help heat to escape from homes.

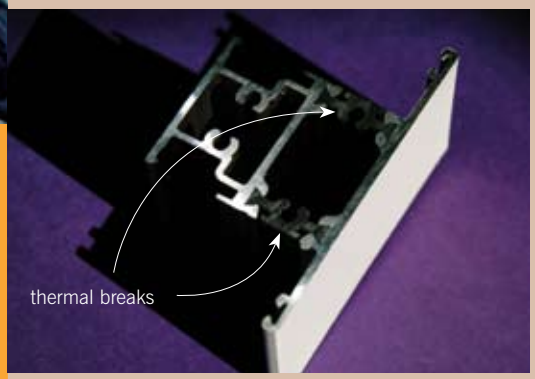
But there is a way to avoid this, by using aluminium window frames which have a piece of plastic built into them to act as a 'thermal break'. We found a little demonstration of this at the recent NZIA Conference (see photograph below).

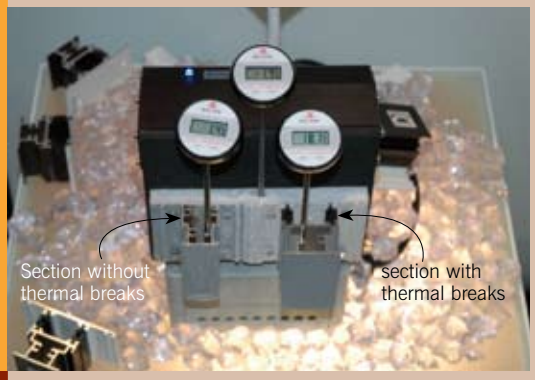
Two pieces of aluminium frame are attached to a cold (-1.9°C) surface. A thermometer on the metal-only frame shows it has a temperature of 1.4°C. But a thermometer on the thermally-broken frame records a temperature of 18.1°C. In other words, the little bits of black plastic built into the frame have effectively insulated the frame from the cold.

If you are in a position to choose the window frame material, we recommend you consider thermally-broken aluminium (or timber, uPVC, composite or other thermally efficient frames) rather than standard aluminium frames.

2 Could a small piece of plastic save your life?

In 2007, three homeowners died after they stapled underfloor aluminium foil insulation





eps you nd safer

into power cables. One way to avoid this risk is to use locally-manufactured plastic staples. The staples are non-conductive, non-corrosive and they don't chip or damage blades or cutters.

Manufacturer TAGAplus also has a range of applicators to fix the plastic staples, including a pneumatic stapler, a battery-operated applicator for portable use, a hammer stapler and hand-operated staplers and tackers.

The staple range includes staples which can go into hardwood and MDF.

At a glance

Masks

Masks protect you when you are sanding, cutting, painting or carrying out other tasks which produce dust or fumes that could be harmful. Knowing which mask you should use for which task is important.

Unvalved P1 mist/dust respirator – suitable for dust of low toxicity. Won't protect you against fumes, vapours or paint spray.

Chemical filter – can be used in a mask to protect against solvent vapours, degreasing fluids, thinners, lacquers and enamel paints.

Valved P2 \toxic dust mask – suitable for hardwood and softwood dust as well as welding and brazing fumes. Will not protect against gases, other vapours or paint spray.

P2 toxic dust filter – for fine dust and welding fumes etc. Note that P3 filters are needed for highly toxic particles.

Half-mask respirator – with changeable filters and pre-filters for protection against paint mists and vapours. Use the appropriate filter for the job. Half-masks are not suitable for use in highly toxic areas or if the paints contain iso-cyanates. In these cases use a full mask with air supply.

There are many types of filters and pre-filters available including carbon-containing ones. Seek specialist advice for assistance. Your safety provider can supply a usage selection chart.

COMPETITION

Win!

A Leica Disto D2 Electronic Measuring Tool Worth over $400!

Taking indoor measurements is easy with this great tool. Just point the laser beam, press the DIST-key and read off the measurement. It has short-cut keys for addition, subtraction, area and volume calculations. It is fast and accurate, and the illuminated display means you can use it even in poor light.

The prize is provided courtesy of The Tool Shed.

All you need to win is tell us the name of the mystery tool (above, right) and what it's used for.

Send us your answer plus your name, address and telephone number on the back of an envelope. Post it (you don't need a stamp) to: Builder's Mate 31, Mystery Tool Competition, FREEPOST BRANZ, Private Bag 50 908, Porirua 5240. One entry per entrant please.

Don't forget to tell us where you picked up your copy of *Builder's Mate*! The winner will be the first correct entry drawn at 9 am on Friday 29 August 2008. Details will be posted on the BRANZ Ltd website (www.branz.co.nz) and in the next edition of *Builder's Mate,* due out on 1 October 2008.

Terms and conditions:
Entry is open to all New Zealand residents except employees and immediate families of BRANZ Ltd, BRANZ Pty, Building Research and The Tool Shed shops. The competition will close on Friday 29 August 2008. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.

?

What is the name of this tool pictured below and what is it used for?

the Tool Shed

BUILDER'S MATE WINNERS

The winner of the BM 30 competition was Brendon Powley from Papakura, Auckland. The mystery tool was a rebar tier, used for tying reinforcing steel and mesh. Brendon won a Hitachi Rotary Hammer Drill.

BLOKES on the job

JAMES LAERY

BCITO apprentice building in Westmere, Auckland

Favourite tool
His collection of wood and electric planes.

Favourite tip
Listen to the boss.

MARK COCHRANE

Building in Westmere, Auckland.

Favourite tool
Block plane.

Favourite tip
Always use your commonsense.

STEVE BUTLER

Building in Takaka, Golden Bay

Favourite tool
Sharp pencil – important on more than one level.

Favourite tip
Given by his workers: "Yawn and you're off!"

Know someone on the job? Send us details of his or her favourite tip and tool and you could win $50-worth of BRANZ books.