

BUILDER'S MATE

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MEMBRANES FOR TILED FLOORS

Tiles are a very popular finish for wet areas like bathrooms, specifically in showers, but tiles with a cement-based grout can't be considered watertight and when installed over a substrate that is not impervious, they rely on a waterproofing membrane to do the job. Sadly, poor application can mean the waterproofing just isn't up to it. Current reports to BRANZ are indicating that there are a significant number of wet area failures due to water being allowed to migrate from the wet area to other parts of the building, resulting in failure of framing, linings, flooring and finishes.

Although builders should always use a specialised contractor to apply the waterproofing membrane, it's important to have a clear understanding of how the work would be completed. It's also important that the system to be used and the extent of the waterproofing is specified by the designer, the specified system is installed and the manufacturer's specific instructions are read and followed exactly to ensure the product warranty will apply.

Membrane substrates must:

- be clean
- be dry (75% relative humidity or less for concrete or mortar – a reading of 70% is better, as the

accuracy of the measurement gauges is $\pm 5\%$; 20% or less moisture content for plywood) – this is particularly important for slabs to ensure dampness from below won't affect the installation and to be sure that all shrinkage has occurred

- not be LOSP-treated ply – LOSP solvents can affect the membrane and the adhesives used
- be rigid – for any tiling installation, there should be no deflection in the substrate, as this will lead to cracking in the ties and mortar (the maximum permitted deflection in framing and substrates is one 360th of the span)
- have the falls formed within the substrate. >

BRANZ NEWS

Build articles on the BRANZ website

Did you know that individual *Build* articles are available on the BRANZ website? You can buy recent *Build Right* and *Design Right* articles, – for example, articles available from the August/September issue include:

- Wall underlay installation
- Fascia/barge board construction
- Thicker insulation changes roof designs
- Insulation thickness and R-values
- Penetration seals
- Compliance paths.

And, apart from the two most recent *Build* issues, all other articles are free to download. Check it out at www.branz.co.nz/welcome_to_build.

Win!

A DeWALT DC308K-XE 36 Volt Jig Saw

Worth \$950!



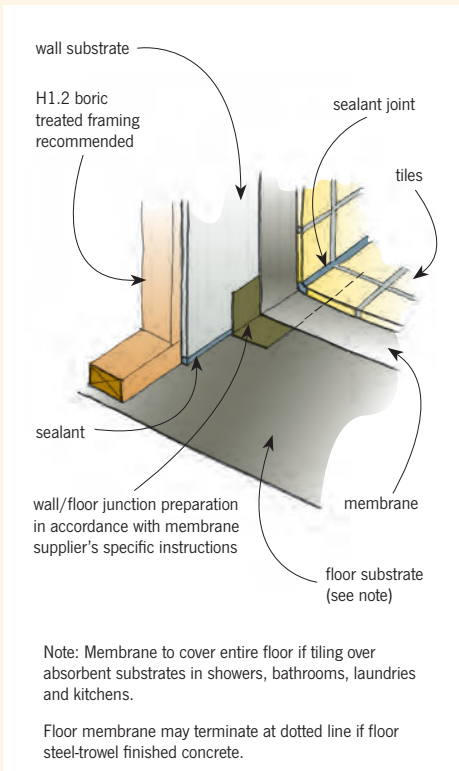
HAMMER 'N' NAILS

NOW THAT YOU'VE APPEARED ON FAIR GO, HAMMER, YOU'LL BE ABLE TO CALL YOURSELF A CELEBRITY BUILDER.



Key steps in membrane installation:

- Install outlets.
- Seal wall/floor substrate junction.
- Prime – most tile waterproofing membranes require the substrate to be primed.
- Carry out any preparatory work, e.g. reinforcing to wall/wall and wall/floor junctions, bond breakers



- at junctions, in accordance with the specific installation instructions for the system being used.
- Apply the correct number of coats.
- Use the correct application method.
- Don't dilute any product – it's important to achieve the correct dry film thickness.
- Allow sufficient time for curing – curing time depends on temperature and environmental moisture (humidity) conditions. Acrylic membranes can re-emulsify if not cured fully before the tiles are applied.
- Flood test on curing to make sure it is waterproof.
- Protect the membrane once laid – protecting finished areas of tiled floors after laying is also recommended.

So what can go wrong?

Here are some common problem areas to avoid:

- No membrane installed.
- The high-risk areas for water are not fully protected – showers that do not have screens are becoming more common, and this increases the area of a bathroom that will get wet and thus need waterproofing.
- Lack of curing time.
- Insufficient film build.
- Specified membrane not used or used incorrectly.
- Dilution of liquid product on site.
- Reinforcing omitted.
- Reinforcing not fully embedded in the membrane.
- Poor installation.

build



Do you get your **free Build** magazine?
 All building contractors who are in the business of building and have paid a Building Research Levy in the current year can receive BRANZ's *Build* magazine for free. This Levy is paid as part of the building consent fee on all construction projects over \$20,000. If you are missing out on your free copy of *Build*, call 0800 80 80 85 (press 2) or email verachan@branz.co.nz.

Dribblings from the Old Geezer



There are positions in life where, even with the best of endeavours, you'll end up being the target of ire. Let's say, through a lot of sacrifice, you've made the New Zealand cricket team and gone on tour to the Subcontinent. When the predictable humiliation happens, this usually results in you becoming the target of derision from talkback radio's red-necked rabid callers. Likewise with our councils. Building Consent Authorities they may now be, but for many, they are still "the council" – words to be spat out like a rat's head found in a pie. It is so easy and common for our industry to heap scorn on all and sundry when they don't reflect our own views.

Just like our cricket playing, the RMA gets almost as much flak and can be a difficult process if you're not an expert in the field, so it was refreshing recently to hear friends praising the consent officials they were working with. In this instance, the officials did more than guide and hold hands. A successful outcome was achieved only through their guidance and advice. They were proactive with suggestions and help, and they enhanced the project with their presence. I wish I could name them so they could take a bow. And an encouragement for all of you: "Come on fellas, give praise a go!"

Des Molloy



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Overconfidence = potential disaster

A scary tale from Graeme Hughes, ex-builder and current *Build* magazine advertising salesperson.

I was a highly skilled carpenter in my day, so when my commercial building tenant needed an extra power meter for the local supply authority because the building was being subdivided, I thought, "Easy. I'll fit the meter box because it saves me getting in a professional, it saves me money, it's good exercise and it's easy" – or so I thought.

The power cable would be a big sucker – about 40 mm thick. My logic was that it should go straight up the cavity to the top plate, then along to an inside power distribution board. I took considerable time finding the studs with one of those battery operated stud finders (the abrasive paint finish meant it was too painful to use the traditional knuckle method!), marked them and set up for the big cut. I even went to the trouble of exploring the location by drilling some small holes along the pencil lines I had marked showing where the meter box would go and where I would cut, just to be exactly sure where the studs and nogs were. I wasn't going to get this wrong!

"Perfect," I thought, as the confidence flooded back. My endorphins were pumping, and I was where I belonged – on the end of a skill saw. In my early days, fresh out of tech, I would have set the skilly at a maximum depth – the cladding was James Hardie 9 mm compressed sheet, so the skilly should have been set to bit more, say 11 mm max.

But what went through my head was, "Let's just hold the blade out from the cladding and

guess the depth." I thought I'd save myself the trouble of setting my skilly and save time – all of 2 minutes.

Using an abrasive disc, I cut along the bottom line – "Perfect," I thought – then up the first vertical line – "Great stuff, cutting like butter, I've still got it" – and then along the top – "How good am I? So easy!" I was so confident by the last vertical cut, I sort of forgot about the depth of the blade. I didn't sink it right in, but certainly further than the safe depth of 11 mm. But never mind, the square I'd cut was perfect, absolutely perfect.

I punched out the compressed sheet, cut out the building paper with my trusty Stanley knife and removed the fibreglass batts.

And there – to my utter amazement and disbelief – was this bloody huge cable right in the middle of the hole. How did I know the dummy who installed it took the shortest route across the wall cavity?

But most astonishing of all, I was still alive. I had cut through the plastic sheathing of the cable and just exposed the copper – I'd actually shined the copper up.

I drive past the building from time to time and always shudder at the thought of what happened that day and how lucky I am to be alive to tell this story.

I have now retired from doing what I once did well and will always get in a pro, who has the appropriate ammunition and credentials.

AT A GLANCE

Want to advise your clients on the most energy-efficient appliances to buy for their new home? Here's how to read energy and water rating labels:

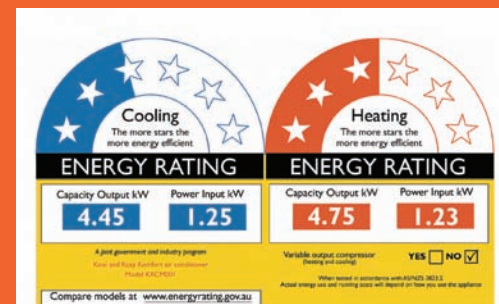
Energy rating labels

Energy rating labels are compulsory for fridges, freezers, washing machines, dryers, dishwashers and air-conditioning units.

The labels contain a star rating for energy efficiency – each star means a 10% saving in running costs. For air-conditioning units, ratings are given separately for heating and cooling.

The labels also show an estimate of the energy consumption per year. This is an important consideration, as a large appliance with a high star rating will use more power than a smaller appliance with a lower rating for the same level of use. For dishwashers and washing machines, the labels are also required to show information about standby power.

Find out more at www.energywise.govt.nz.



Energy Star

Energy Star is a global mark of energy efficiency. It's awarded to the most energy-efficient appliances and electronic products available on the market at the time. Find out more at www.energystar.co.nz.

Water efficiency labels

Water Efficiency Labelling and Standards (WELS) is Australia's water efficiency labelling scheme, also used by New Zealand. It allows consumers to compare the water efficiency of different products.

The rating system has six stars – the more stars the better. The water efficiency labels are similar to the energy rating labels (they're blue) and also show a water consumption or water flow figure. Find out more at www.waterrating.gov.au.



Phil Hollobon, manager of Contact Electrical in Hamilton (who was on site within 15 minutes), pointing out the fairly obvious!

COMPETITION Win!



A DeWALT DC308K-XE 36 Volt Jig Saw Worth \$950!

This heavy duty orbital jig saw has a fan-cooled motor with replaceable brushes and variable speed and delivers fast cutting action up to 2,700 strokes per minute.

The prize is provided courtesy of The Tool Shed.

All you need to do to win is tell us the name of the mystery tool (above right).

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 38, Mystery Tool Competition, FREEPOST BRANZ, Private Bag 50 908, Porirua City 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 23 October 2009. 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 28 November 2009.

Terms and conditions:

Entry is open to all New Zealand residents except employees and immediate families of BRANZ and The Tool Shed shops. The competition will close on Friday 23 October 2009. The prize is not transferable for cash. The judge's decision is final. No correspondence will be entered into.



Here's a close up of part of a tool.
What is it?



Photo: Anthony Dower, the winner of the BM 36 competition, at The Tool Shed Penrose receiving his prize from Nick Armiger, DeWALT Sales Manager.

BUILDER'S MATE WINNERS

The winner of the BM 37 competition was Bee Chui Saw from Hamilton. The mystery tool was a spirit level, and the prize was a Hitachi CR13V Sabre Saw.

BLOKES on the job

STEVE ADAMS

Drainlaying on a major renovation in Westmere



Favourite tool

Any sized digger.

Favourite tip

Don't believe what others tell you – check for yourself.

ARNAUD DE'TOURETTES

Builder working on a major renovation in Westmere



Favourite tool

Festool plunge saw.

Favourite tip

Always measure twice, cut once.

NICK MITCHELL

Painter working on a major renovation in Westmere



Favourite tool

Any powered sander.

Favourite tip

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Standards referred to can be purchased from Standards New Zealand.
Tel: 04 498 5991 or www.standards.co.nz.

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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.