

Glass shelves

Glass is commonly used in a number of situations as a storage shelf. While use of glass as a shelf is not specifically covered in NZS 4223 *Glazing in buildings* Part 3 Human safety requirements, there is a requirement under Building Code clause F2 *Hazardous building materials* (F2.3.3 Performance) that:

Glass or other brittle materials with which people are likely to come into contact shall:

- a) if broken on impact, break in a way which is unlikely to cause injury, or
- b) resist a reasonably foreseeable impact without breaking, or
- c) be protected from impact.

To meet these requirements, it is recommended that glass shelves that are not enclosed within a cupboard be made from Grade A safety glass – that is, either toughened or laminated safety glass.

Timber cavity battens and metal cladding

E2/AS1 specifies in paragraph 9.6.9.2 that, where a metal cladding or flashing is fixed to a timber cavity batten that has been treated with a copper-based timber preservative, the metal must be isolated from the timber so that the potential for corrosion of the cladding is avoided. The most common method used is typically a strip of kraft building paper (complying with Table 23 of E2/AS1) fixed to the face of the timber battens before the metal, but E2/AS1 also allows the battens to be primed.

This requirement applies to:

- H3.1 treated timber battens that have been LOSP treated using CuN (copper naphthenate with the preservative code number 57) preservation chemicals
- all H3.2 and above treated timber battens (CCA, CuAz and ACQ).

ALF 3.2 Wall selection

When using the ALF 3.2 programme and you create a wall by mistake, be sure to delete that wall entry by clicking on the delete box at the end of the selected line. If you don't delete it, the programme assumes that there is a wall that you haven't inputted values for and will show the results as to be calculated, (TBC).

ALF 3.2 Windows

When in the walls and windows section of ALF 3.2, for each window, you must fill in the degree of shading likely (after completing the window size and type). If you don't specify the degree of shading (by not completing the box for it), solar gains will not be calculated. While this does not matter for the BPI it will affect other design results. [ALF 3.2](#)

BRANZ seminars 2010 – Are we there yet?

The current building control system has been in place since 1992, with a major shake-up in 2004, particularly for weathertightness. This seminar series will be presented at 23 centres around the country and aims to see how far we have come and look at where improvements could still be made.

This will be done by:

- looking at current and recently completed research and its application to the design and construction of today's buildings
- considering the current approach to building design, with an emphasis on keeping out water and how this can be achieved through design
- analysing performance of details on site during the construction phase.

This seminar series will be of interest to a wide cross-section of industry, especially builders, designers and building officials.

Advance notice of the dates and locations for this seminar are on our website – [Are we there yet?](#)

Shrinkage of decking timbers

There have been a number of reports to the BRANZ Helpline regarding excessive shrinkage, particularly along the length of the boards, of radiata pine decking. Timber is currently being cut from relatively young, quickly grown trees supplied to site within (literally) a few days of the trees being harvested.

While it may not always be possible, it is recommended that the radiata pine decking timber is ordered and delivered to site well in advance of it being required. On site, it should be strip stacked and covered to allow it to dry and for initial shrinkage to occur before it is installed. Also, clients need to be informed of the potential for shrinkage, particularly where merchantable grade timber is to be used.

Asbestos alert

An [alert has been issued](#) in Australia by the Australian Competition and Consumer Commission regarding the importation into that country of stacked stone decorative wall tiles (with the brand name 'Snow White') that are bright white in colour, with a quartz-like appearance and are made up of a number of pieces glued together to give the appearance of stacked stone) – they contain tremolite asbestos.

Shrinkage in concrete floor slabs

Concrete shrinks as it dries. About 50% of the shrinkage happens within the first 4 months after placing, but concrete will continue to shrink for at least 12 months, depending on drying conditions. Often insufficient time is allowed in construction programmes for concrete to cure sufficiently before finishes such as tiles are laid.

A floor slab is restrained by the ground on which it is built, by friction and by the keying effect of various foundations. When the shrinkage is restrained, the slab goes into tension, and cracking can occur at a weak point, such as an internal corner. The bigger the slab, the more shrinkage and the more restraint – and a bigger problem! Reinforcement helps, but only so far.

Shrinkage damage to floor slabs can be prevented by observing maximum slab and bay sizes using concrete slab shrinkage control joints and concrete slab free joints to minimise the potential for cracking and control where cracking will occur. It's also important, particularly for slabs near the maximum size, to use correct mixing ratios and to control mix properties (particularly slump) to minimise shrinkage.

NZS 3604 clause 7.5.1 states that the maximum dimension of a slab-on-ground floor is 24 m either way between free joints, or between free joints and the slab edge. This allows a slab to be a maximum of 24 x 24 m. (Note that the 24 m is a slab edge dimension, not a diagonal dimension.) For more information see Build 89 Aug/Sep 2005 available for download free from [Concrete slabs and control joints](#).

Lintels and Beams Calculator

When using the BRANZ Lintels and Beams Calculator, you need to select the correct beam application. In one example that was rejected by the BCA, the designer had used a calculation for a deck beam that would have been fine if the beam had solely supported the deck – there is no allowance in the calculation for a deck to support the loads from a wall and roof. In reality, the beam supported the deck and the wall framing of the building as well and was not, in this case, the correct beam selection. The designer should have used a floor beam calculation, which would have correctly calculated the beam for the loads actually being carried.

When submitting a Lintels and Beams calculation for consent (on the authorised print-out), including the engineering basis with the application is recommended. [Lintels and Beams Calculator](#)

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